Video Wall Controller

User Manual

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Preface

Applicable Models

This manual is applicable to the DS-C60S series video wall controller.

Default Parameters

Type	Default Parameter
Device	• Login user name: admin • IP address: 192.0.0.64
SSH connection	

Caution

To improve system security, it is highly recommended to change password regularly. In order to protect your privacy and corporate data and avoid network security issues, it is recommended to set strong password that meets security requirements.

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
Note	Provides additional information to emphasize or supplement important points of the main text.
Caution	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
Danger	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

Safety Instructions

Caution

In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.

Note

- Provide a surge suppressor at the inlet opening of the device under special conditions such as the mountain top, iron tower, and forest.
- + identifies the positive terminals of the device which is used with, or generates direct current, and - identifies the negative terminals of the device which is used with, or generates direct current.
- The serial port of the device is used for debugging only.
- The interface varies with the models. Please refer to the product datasheet for details.

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Chapter 1 Introduction

1.1 Overview

The video wall controller (hereinafter referred as the device) is the core control device of the screen splicing control system. As a new-generation FPGA-based pure hardware image processing device, it adopts the structure of main control board and service boards to provide the following advantages:

- Supports the video input and video output via various ports.
- Supports the network encoding and real-time preview of signal sources.
- Supports the decoding and output of various network signal sources.
- Supports the high-definition (HD) video splicing and fusion.
- Supports the window splicing, roaming window, and other operations.
- Supports the management on users, network, operation, alarm and logs.

1.2 First-Time Configuration Process

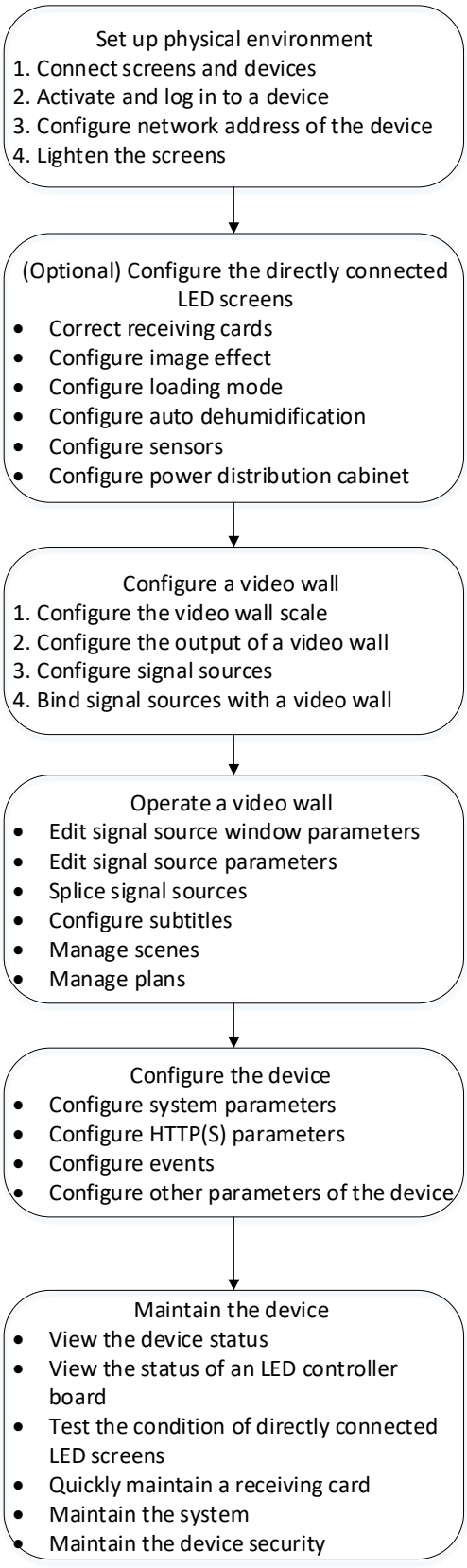

Figure 1-1 First-Time Configuration Process

Chapter 2 Prerequisite Configuration

2.1 Connect Screens and Devices

Connect Single Device and Screens

- Connect an LCD screen and the device: Use a video cable to connect an output port of the device output board to an LCD screen.
- One LED screen consists of multiple LED cabinets. Take either of the following methods to connect an LED screen and the device:
  - Use multiple network cables to connect an external LED controller to multiple LED cabinets, and then use a video cable to connect an output port of the device output board to the external LED controller.
  - Use multiple network cables to connect an electrical LED controller board to multiple LED cabinets.

Note

The figure below is for illustration only.

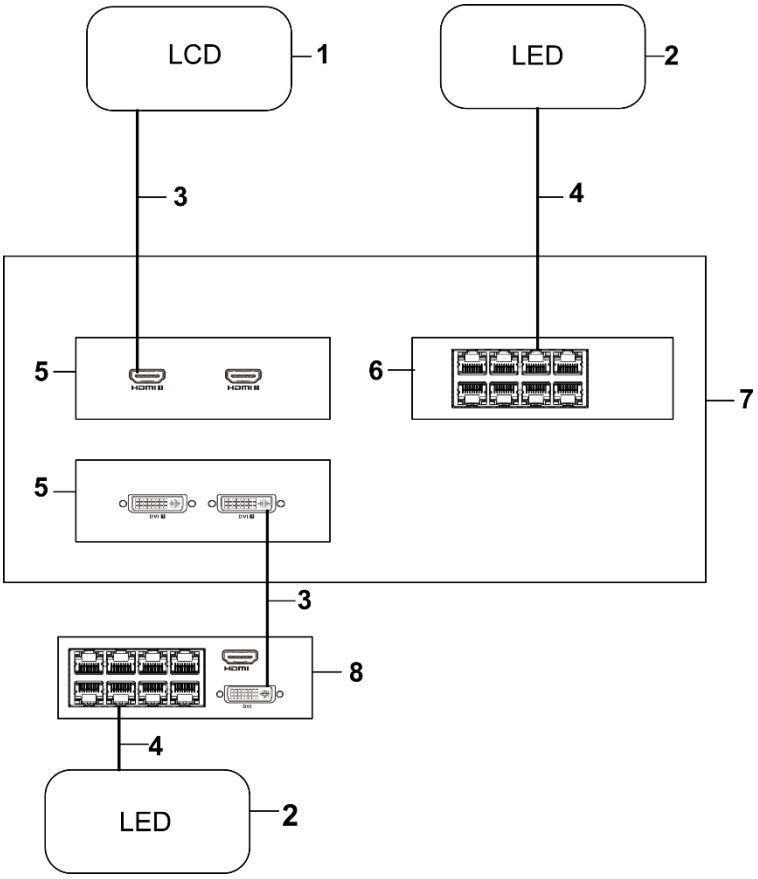

Figure 2-1 Connect Screen and Device

1. LCD screen	2. LED screen	3. HDMI or DVI video cable
4. Network cable	5. Output board	6. Electrical LED controller board
7. Device	8. External LED controller	

Connect Two Devices and Screens

Step 1 Connect the indoor device and outdoor device for long distance transmission.

1) Use multiple network cables to connect multiple electrical ports of an optical LED controller board in the outdoor device to multiple LED cabinets.
2) Use the optical fibers to connect the optical ports of the optical LED controller board in the outdoor device to the optical ports of the optical LED controller board in the indoor device.

Note

- You cannot install the input boards or decoding boards in the outdoor device.
- You cannot install the input board in Slot S6 of the indoor device.

Step 2 Connect the indoor device and a screen.

- Connect an LCD screen and the device: Use a video cable to connect an output port of the device output board to an LCD screen.
- Use multiple network cables to connect an external LED controller to multiple LED cabinets, and then use a video cable to connect an output port of the device output board to the external LED controller.

Note

The figure below is for illustration only.

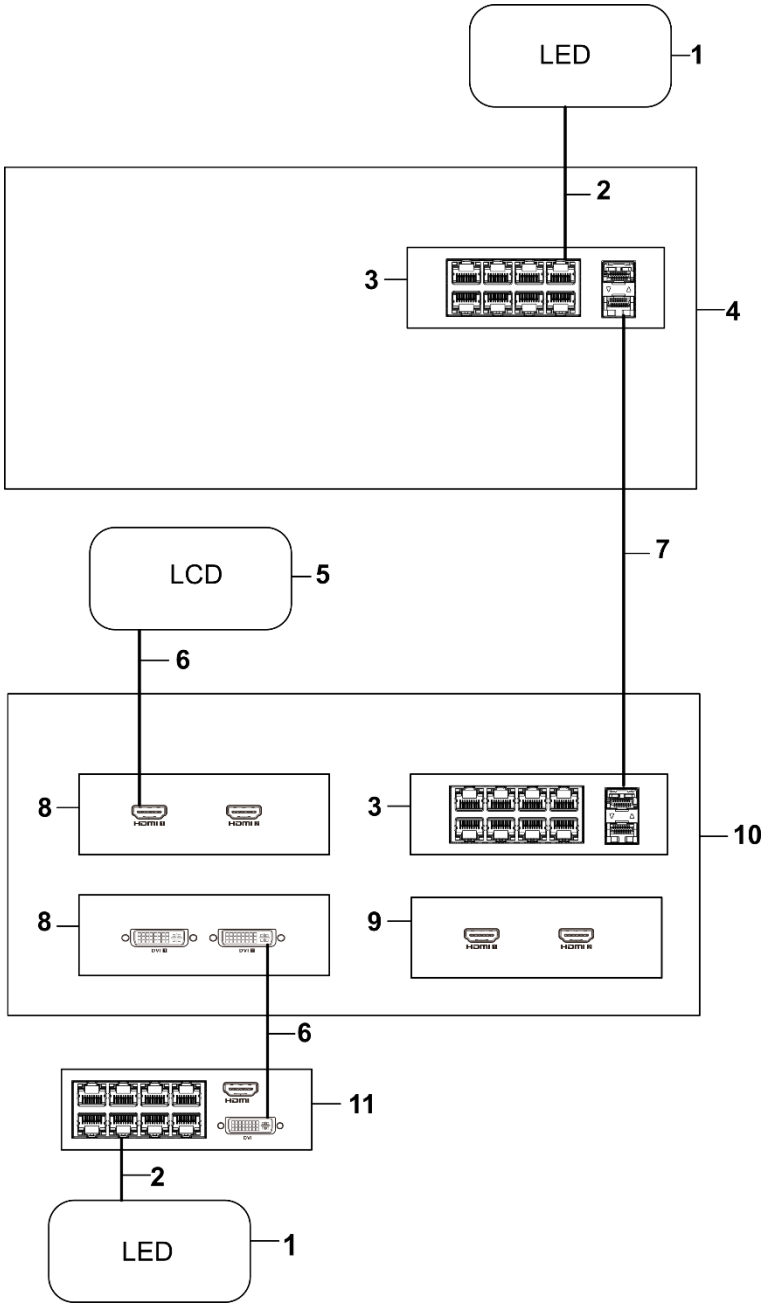

Figure 2-2 Connection for Long Distance Transmission

1. LED screen	2. Network cable	3. Optical LED controller board
4. Outdoor device	5. LCD screen	6. HDMI or DVI video cable
7. Optical fiber	8. Output board	9. Input board
10. Indoor device	11. External LED controller	

2.2 Activate and Log In to Device

You should activate the device before using the device for the first time. You can use the SADP client or the device web page to activate the device. When activating the device, obey the following requirements to set the password:

- To improve system security, it is highly recommended to change password regularly. In order to protect your privacy and corporate data, and avoid network security issues, it is recommended to set strong password that meets security requirements.
- Password should contain 8 to 16 characters and at least 2 of the following types: digits, lowercase letters, uppercase letters, and special characters.
- Password cannot contain user name, 123, admin (case insensitive), 4 or more continuously ascending or descending digits, or 4 or more consecutive repeated characters.

Use SADP Client and Web Page

Step 1 Connect the device and computer to the same LAN. Make sure the device and computer in the same network segment.

Step 2 Download and install the SADP client on the computer.

Step 3 Open the SADP client.

Step 4 Select the device that is not activated, enter the activation password and confirm it, and click **Activate**.

If the device cannot be found, you can restart the SADP client.

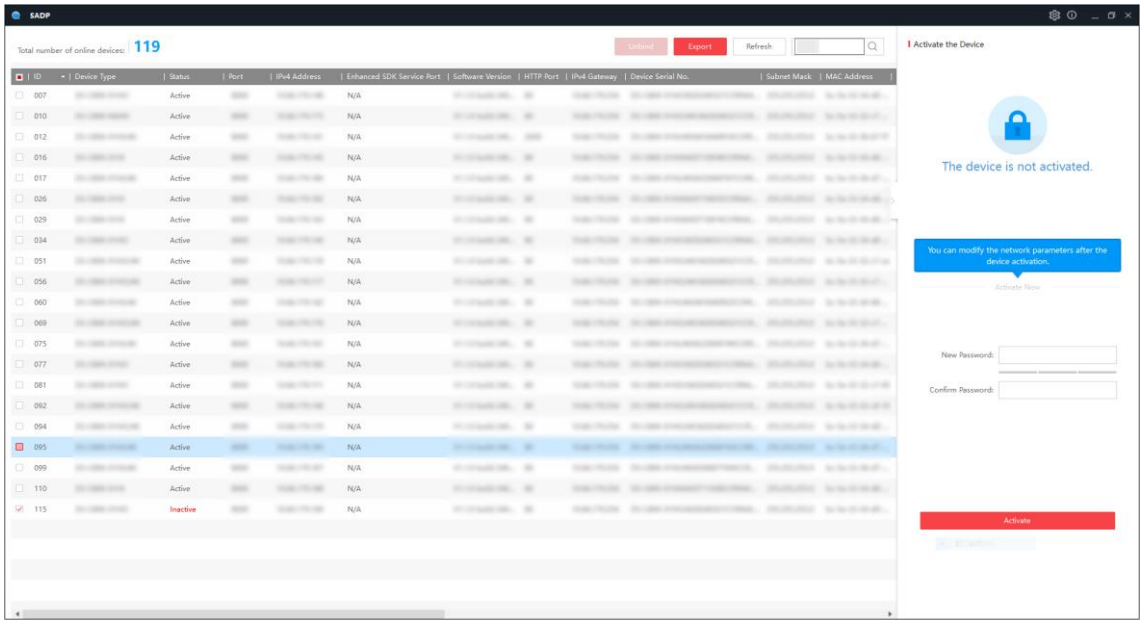

Figure 2-3 Activate the Device via SADP Client

Step 5 View the device IP address in the SADP client and enter the device IP address in the computer browser.

Step 6 Enter the user name and the set activation password, and then click **Log In**.

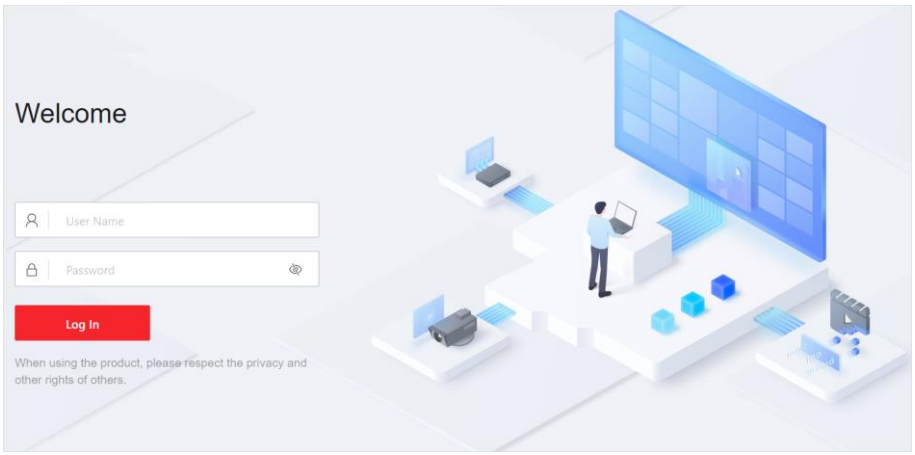

Figure 2-4 Login Page

Step 7 (Optional) To edit the password, you can click the username in the upper right corner of the web page and then click **Change Password**.

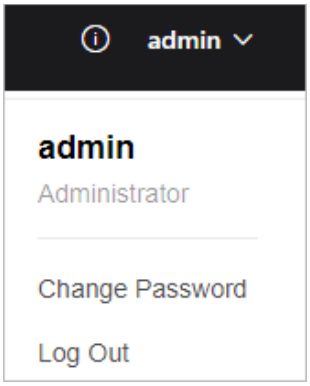

Figure 2-5 Change Password

Use Web Page

Step 1 Use a network cable to connect a computer to the device.

Step 2 Set the computer IP address to any IP address in the range of 192.0.0.2 to 192.0.0.253 (excluding 192.0.0.64) and set the computer gateway address to 192.0.0.1.

By default, the device IP address is 192.0.0.64 and the gateway address is 192.0.0.1.

Step 3 Enter 192.0.0.64 in the computer browser to enter the device activation page.

Step 4 Set the activation password, and then click **Activate**.

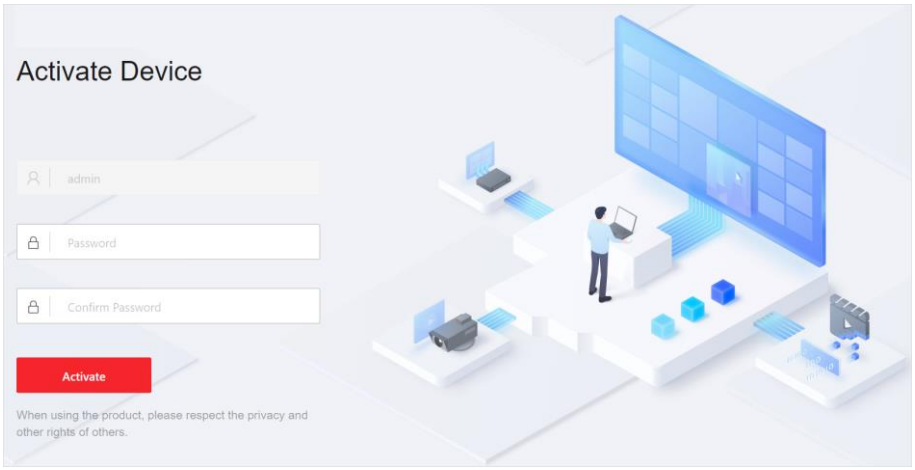

Figure 2-6 Activate the Device via Browser

Step 5 Enter the user name and the set activation password on the login page, and then click **Log In**.

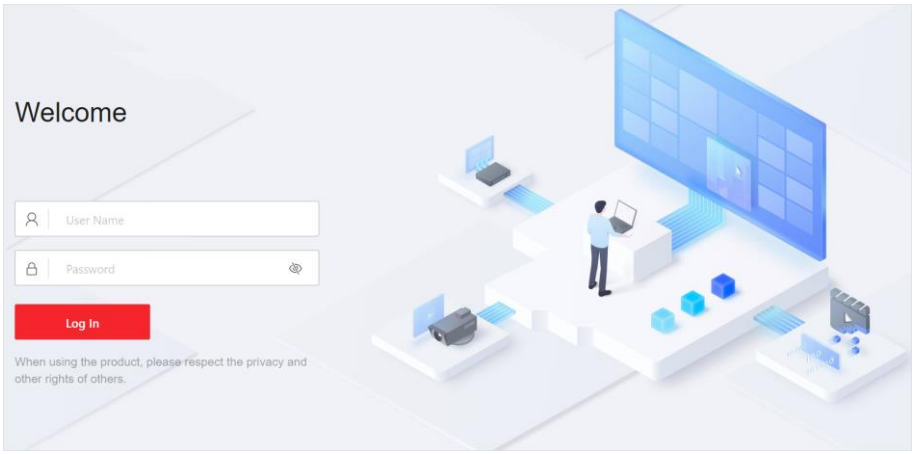

Figure 2-7 Login Page

Step 6 (Optional) To edit the password, you can click the username in the upper right corner of the web page and then click **Change Password**.

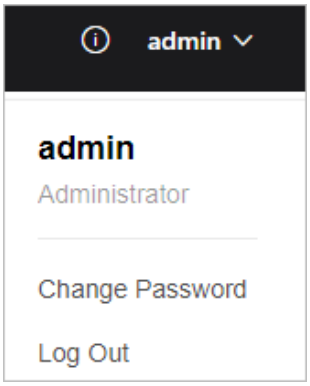

Figure 2-8 Change Password

2.3 Configure the Network Address of Device

Step 1 Go to **Configuration** → **Network** → **Network Configuration** → **TCP/IP**.

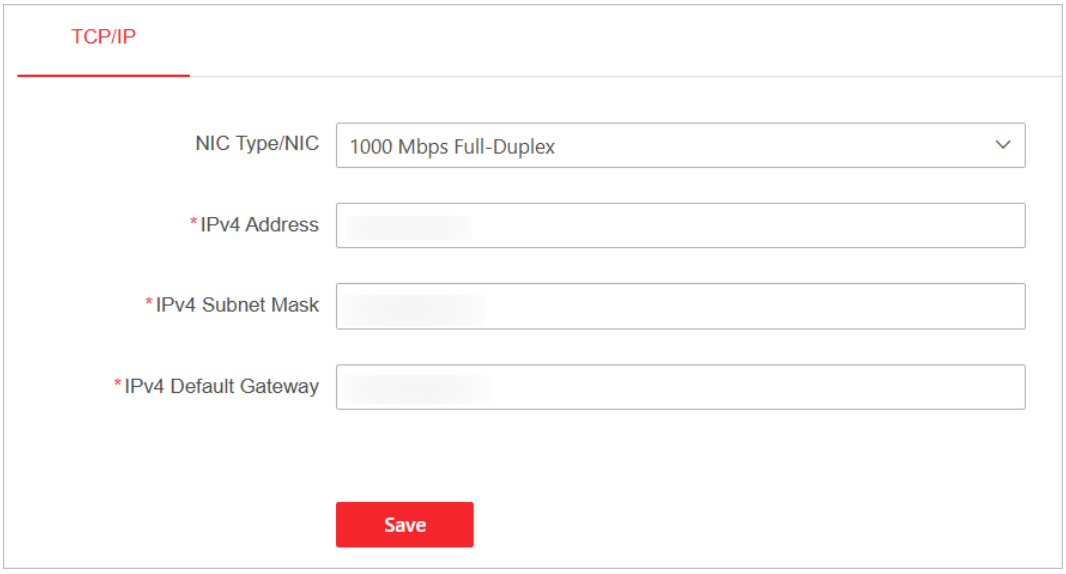

Figure 2-9 Configure the Device IPv4 Address

Step 2 Select the NIC type.

Step 3 Set the IPv4 address, IPv4 subnet mask, and IPv4 gateway for the device.

Make sure the device and the computer are in the same segment after the device connects to the on-site network.

Step 4 Click **Save**.

Step 5 (Optional) Remove the network cable that connects the device and computer, and use the network cable to connect the device to the on-site network.

Step 6 Enter the configured device IP address in the web browser of the computer to log in to the web page of the device.

2.4 Lighten Screens

You must lighten the screens before configuring a video wall:

- Connect the LCD screens to the power source. Typically, the LCD screens are lightened automatically once powered. If not, connect the LCD screens to the power source and press the power buttons on LCD screens.
- Connect the LED screens to the power source and lighten the LED screens as follows:
  - If the LED screens are directly connected to the LED controller boards in the device, you can use the web interface of the device or LED Tool client to lighten the screens.

Note

After lightening the screens via the LED Tool client, you will see a prompt to reconfigure the display lightening parameters on the **Screen Lightening Configuration** page when you log in to the device web page. Please reconfigure the screen lightening parameters on the web page.

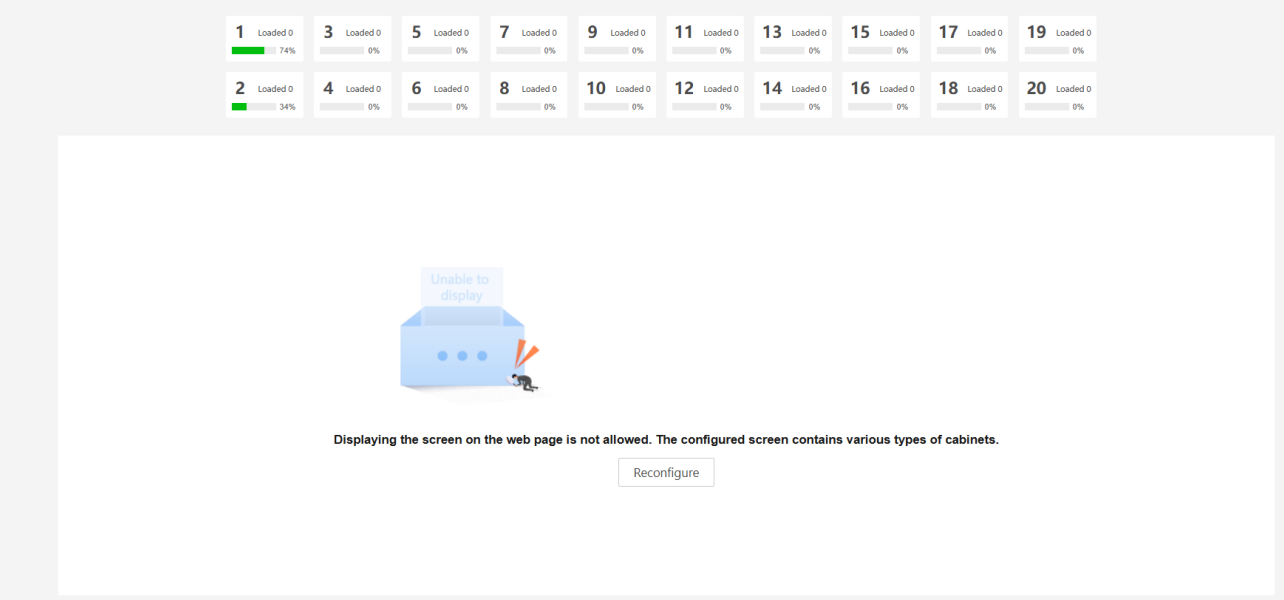

Figure 2-10 Reconfiguration Prompt on Screen Lightening Configuration Page

- If the LED screens are connected to the device through an external LED controller, you can use the web interface of the LED controller, LED batch controller client, or LED Tool client to lighten the LED screens.

2.4.1 Lighten LED Screens (Directly Connected to Electrical LED Controller Board)

When the LED screens are directly connected to the electrical LED controller boards, lighten the LED screens as follows.

Step 1 Use either of the following methods to enter the screen lightening configuration page:

- Go to **Screen Lightening Configuration**.
- Go to **Video Wall Configuration**, and click of the output port of an LED controller board to go to the **Screen Lightening Configuration** page.

Note

One LED controller board provides only 1 output port. To edit the output port name, click .

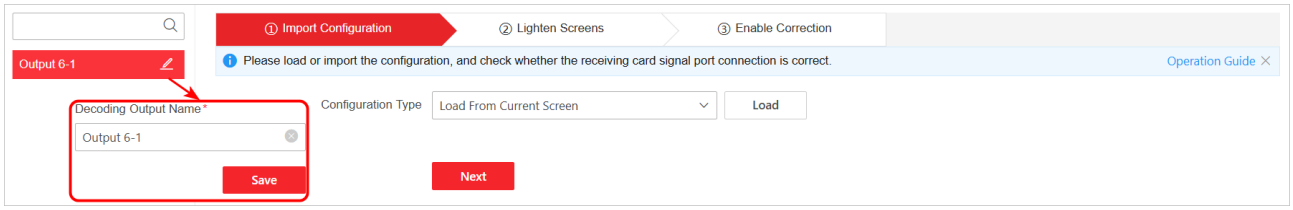

Figure 2-11 Edit Output Port Name

Step 2 On the **Import Configuration** page, select one of the following methods to import the receiving card configuration file and click **Next**.

1) Set the screen size according to the receiving card quantity. Make sure the product of the screen column and screen row is equal to the actual receiving card quantity.
2) Select one of the following methods to import the receiving card configuration file:
   - Select **Load From Current Screen** and then click **Load**.
   - Select **Load From File**, click  to import a file, and click **Load**.
   - Select **Load from Cloud**, enter the serial number, and click **Search**. Select a searched configuration file and then click **Load**.

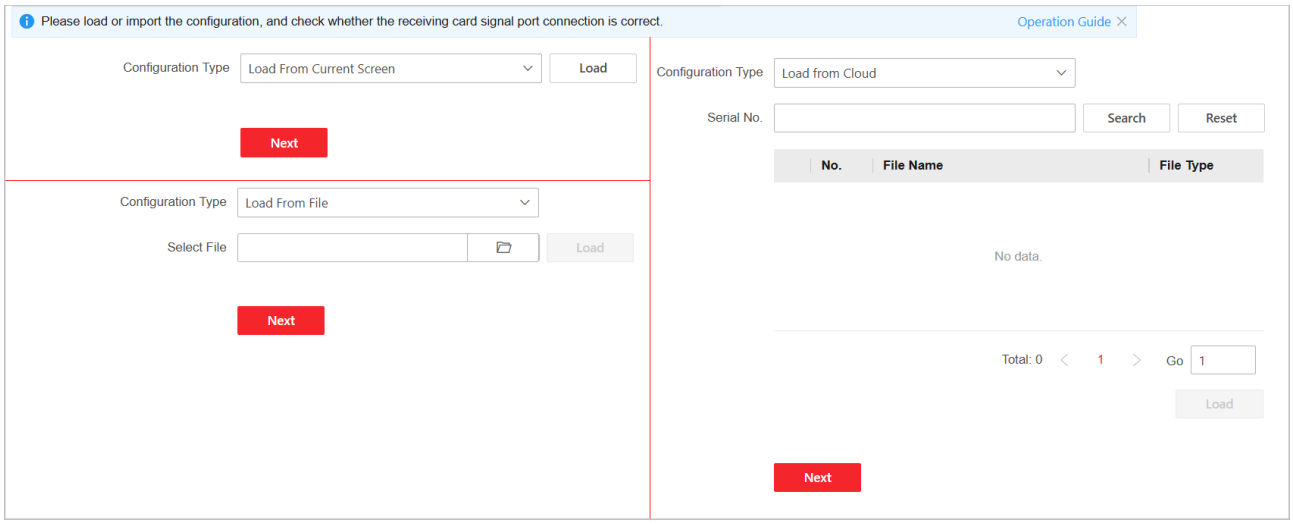

Figure 2-12 Import Receiving Card Configuration File

Step 3 On the **Lighten Screens** page, configure the signal cable connection.

1) Click **Show Connections** to display the network port number on the actual screens.
2) According to the network interface number on the actual screens, select a network interface of the LED controller board and then take either of the following methods to connect the selected network interface to the screens:
   - Click on the screens in sequence to complete the connection according to the operation order. The connection may span across different network ports of the LED controller board.

– Click on a screen as the starting point of the connection, press and hold to determine the connection range, select the connection shape in the pop-up window, and then click **Finish** to complete the connection.

3) (Optional) You can perform the following operations as required:

– Click **Undo** to undo the previous operation.

– Click **Restore** to restore the previous operation.

– Click **Clear Connections** and select **Clear Current Sending Port Connection** to clear the signal connection of the selected network port.

– Click **Clear Connections** and select **Clear All Sending Port Connection** to clear the signal connection of all network ports.

– Click **Get Status** to refresh the receiving card online status on this page.

4) Click **Finish**.

5) Use the same method to configure signal connection for other network interfaces.

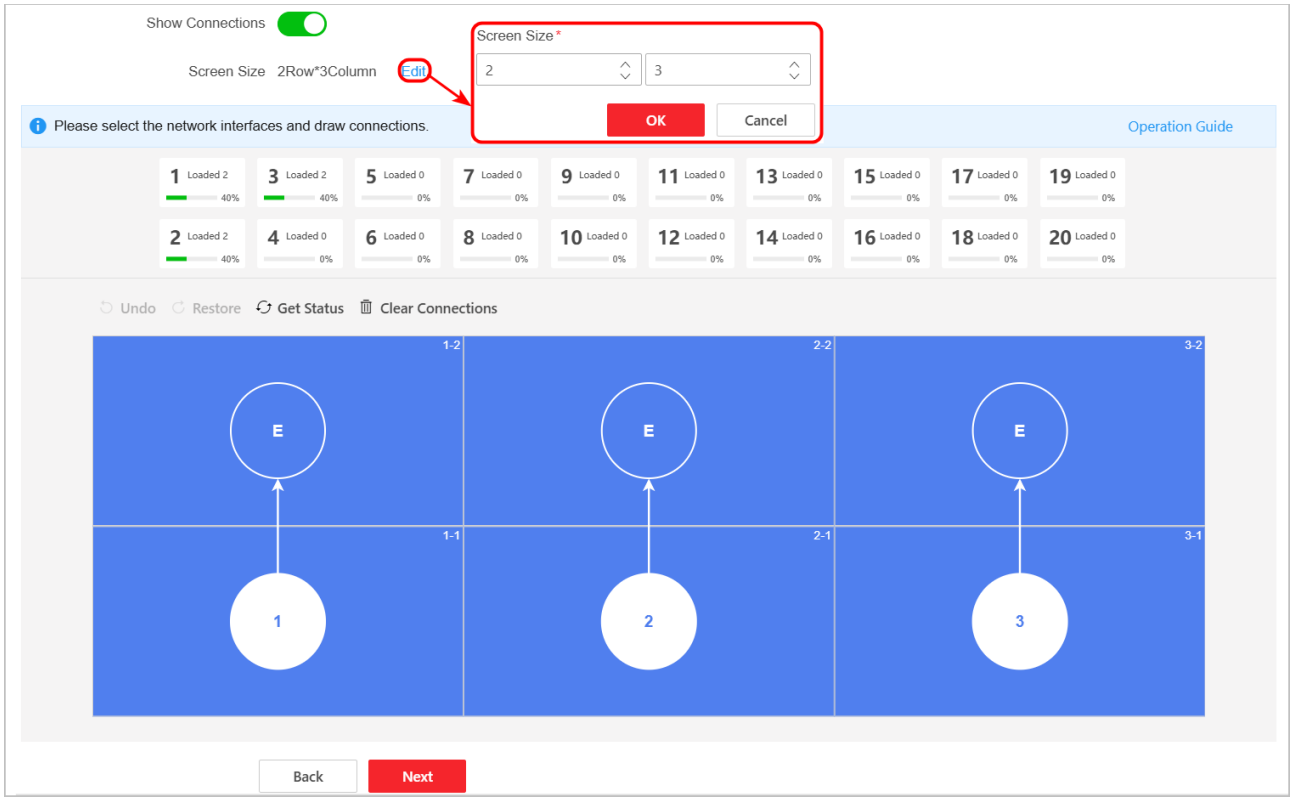

Figure 2-13 Configure Signal Cable Connection

Step 4 Complete the screen lightening configuration:

- For the HUB receiving cards, you have completed the screen lightening configuration.
- For the AXS receiving cards, click **Next**. On the **Enable Correction** page, enable correction.

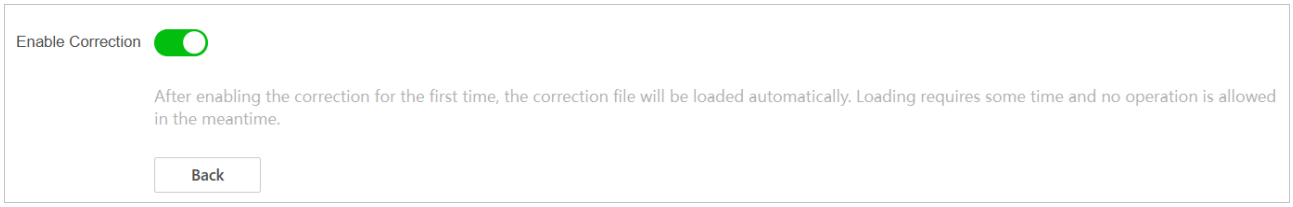

Figure 2-14 Firstly Correct AXS Receiving Cards

2.4.2 Lighten LED Screens (Directly Connected to Optical LED Controller Board)

When the LED screens are directly connected to the electrical LED controller boards, lighten the LED screens as follows.

Step 1 Use either of the following methods to enter the screen lightening configuration page:

- Go to **Screen Lightening Configuration**.
- Go to **Video Wall Configuration**, and click ⚙ of the output port of an LED controller board to go to the **Screen Lightening Configuration** page.

Note

One LED controller board provides only 1 output port. To edit the output port name, click ✎.

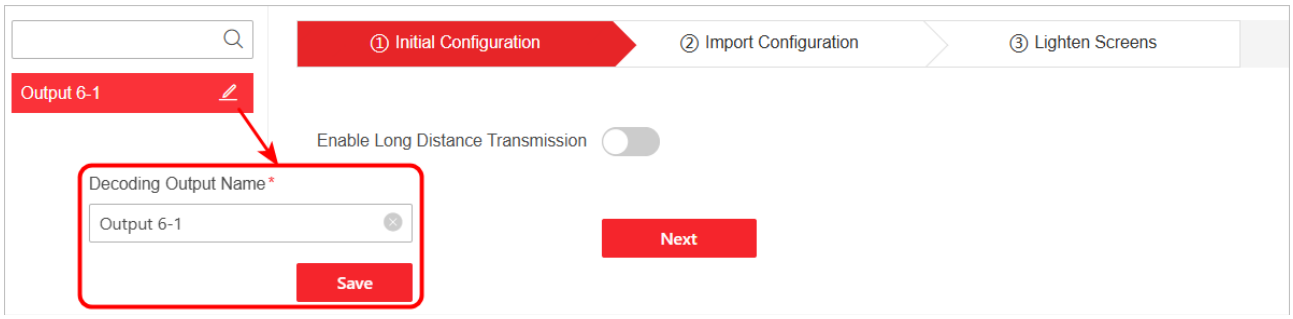

Figure 2-15 Edit Output Port Name

Step 2 On the **Initial Configuration** page, enable long distance transmission and click **Next**.

1) On the web page of the indoor device, enable long distance transmission and complete screen lightening.
2) On the web page of the outdoor device, enable long distance transmission.

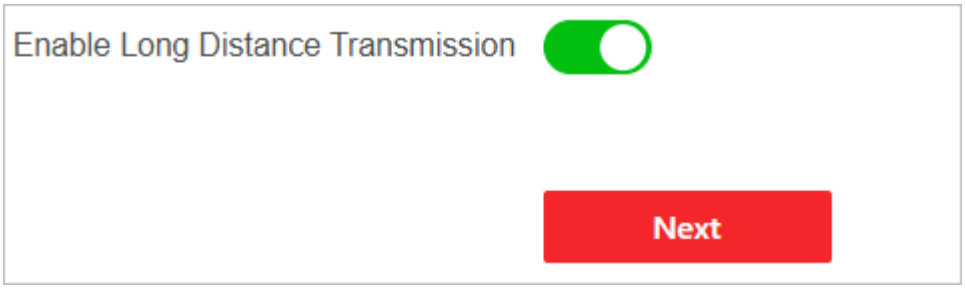

Figure 2-16 Enable Long Distance Transmission

Step 3 On the **Import Configuration** page, select one of the following methods to import the receiving card configuration file and click **Next**.

1) Set the screen size according to the receiving card quantity. Make sure the product of the screen column and screen row is equal to the actual receiving card quantity.
2) Select one of the following methods to import the receiving card configuration file:
   - Select **Load From Current Screen** and then click **Load**.
   - Select **Load From File**, click to import a file, and click **Load**.
   - Select **Load from Cloud**, enter the serial number, and click **Search**. Select a searched configuration file and then click **Load**.

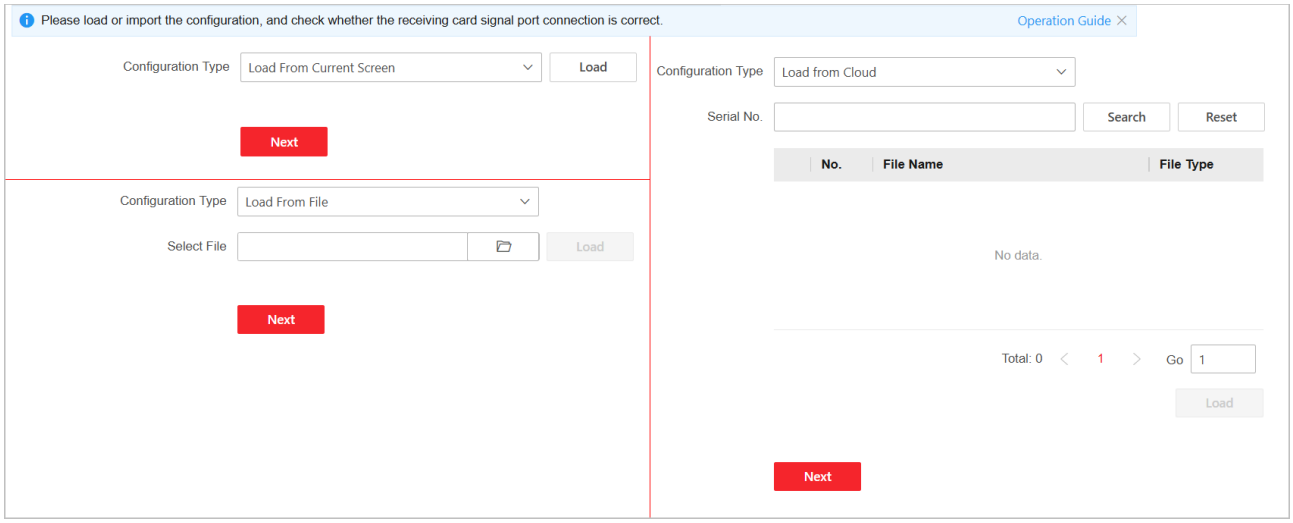

Figure 2-17 Import Receiving Card Configuration File

Step 4 On the **Lighten Screens** page, configure the signal cable connection.

1) Click **Show Connections** to display the network port number on the actual screens.
2) According to the network interface number on the actual screens, select a network interface of the LED controller board and then take either of the following methods to connect the selected network interface to the screens:
   - Click on the screens in sequence to complete the connection according to the operation order. The connection may span across different network ports of the LED controller board.

– Click on a screen as the starting point of the connection, press and hold to determine the connection range, select the connection shape in the pop-up window, and then click **Finish** to complete the connection.

3) (Optional) You can perform the following operations as required:

– Click **Undo** to undo the previous operation.

– Click **Restore** to restore the previous operation.

– Click **Clear Connections** and select **Clear Current Sending Port Connection** to clear the signal connection of the selected network port.

– Click **Clear Connections** and select **Clear All Sending Port Connection** to clear the signal connection of all network ports.

– Click **Get Status** to refresh the receiving card online status on this page.

4) Click **Finish**.

5) Use the same method to configure signal connection for other network interfaces.

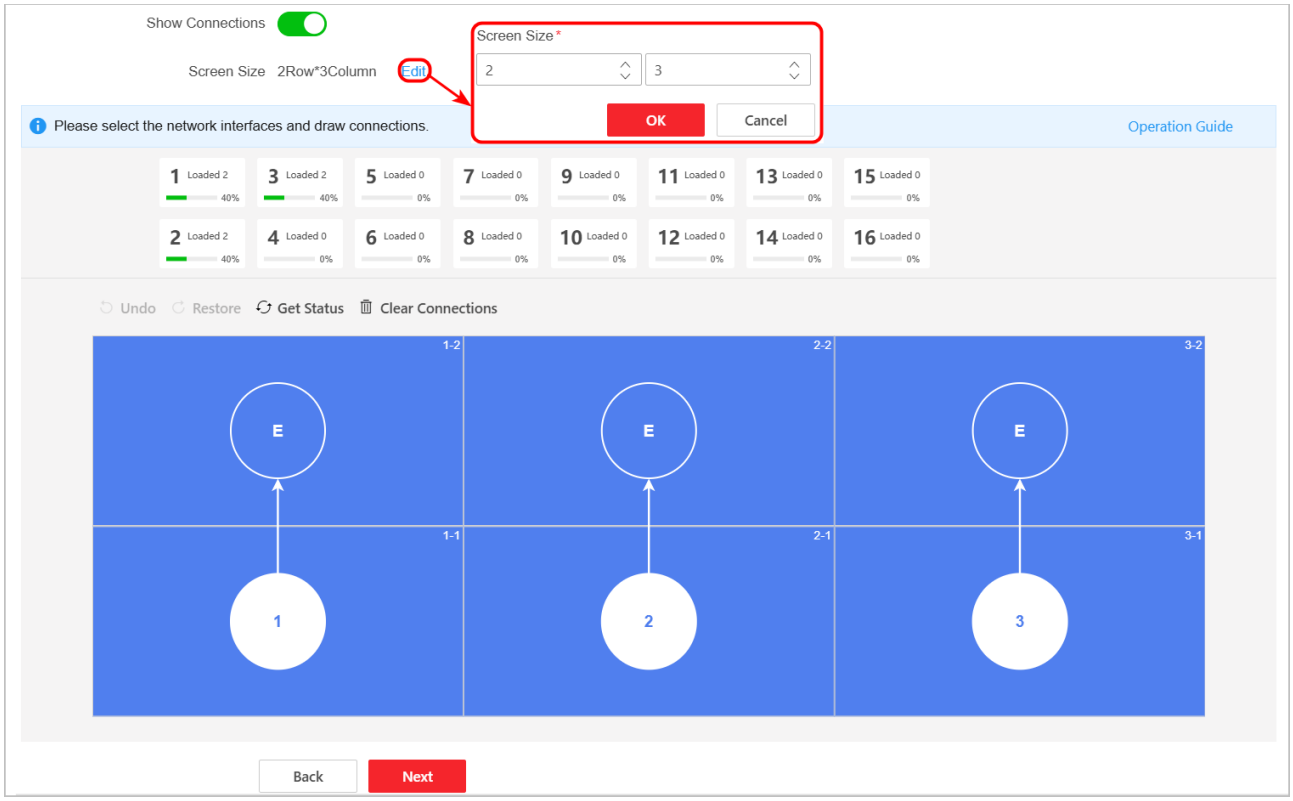

Figure 2-18 Configure Signal Cable Connection

Step 5 Complete the screen lightening configuration:

- For the HUB receiving cards, you have completed the screen lightening configuration.
- For the AXS receiving cards, click **Next** and enable correction.

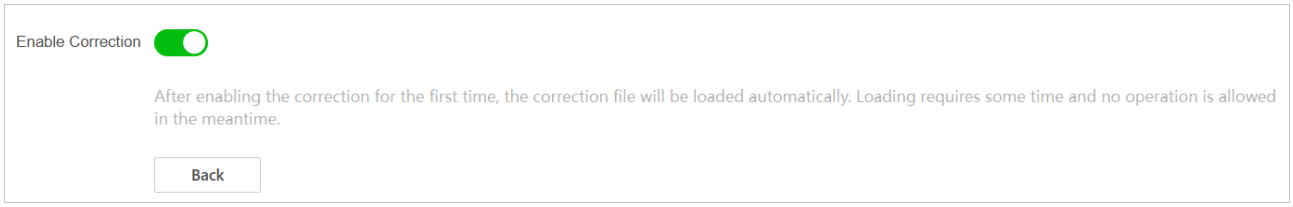

Figure 2-19 Firstly Correct AXS Receiving Cards

2.5 (Optional) Configure Directly Connected LED Screens

When the LED screens are directly connected to the LED controller boards in the device, configure the LED screen parameters as required based on their lightening status.

2.5.1 Correct Receiving Cards

Step 1 Go to **Configuration** → **Receiving Card Correction**.

Step 2 Select an LED controller board or click **Batch Correction**.

Step 3 According to actual needs and lamp board capabilities, switch on **Enable Correction** and check the corresponding correction mode. The available correction mode includes brightness chroma correction and low gray correction. Only some lamp boards support low gray correction.

Step 4 (Optional) If you cannot locate the correction area, enable Show Connections. The actual screens will show the receiving card connection number.

Step 5 Select the correction area:

- Click and select the area to be corrected.
- Click and enter the start coordinates and end coordinates of the correction area.
- If you need to correct modules, check **Show Module**.

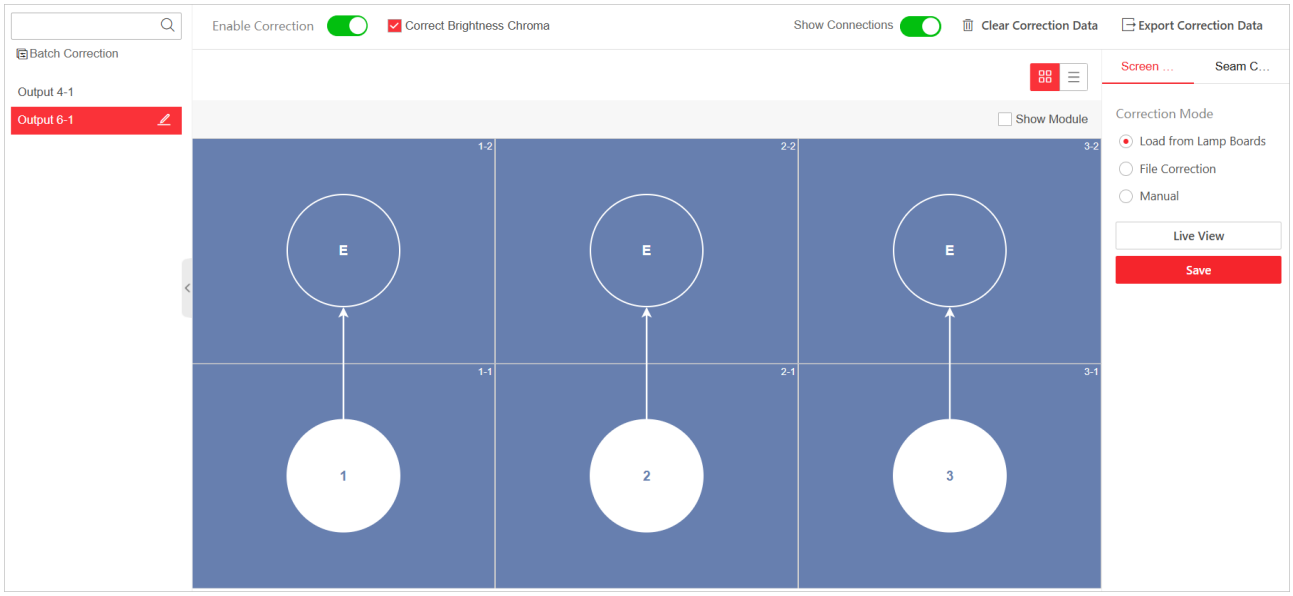

Figure 2-20 Select Correction Area

Step 6 (Optional) For the AXS receiving cards, click **Load from Lamp Board** and then click **Live View** to view the display effect after loading the factory correction data from the lamp boards.

Note

The HUB receiving cards do not support loading the factory correction data from the lamp boards.

Step 7 If the display effect does not meet the requirements, perform manual correction, and then click **Live View** to view the display effect after manual correction.

- If the color difference exists, select **Manual** and adjust the RGB values.
- If bright or dark seams exist, select **Seam Correction**, set the seam direction and width, and adjust the RGB values.
- To adjust RGB values synchronously, enable **Sync Adjustment**.

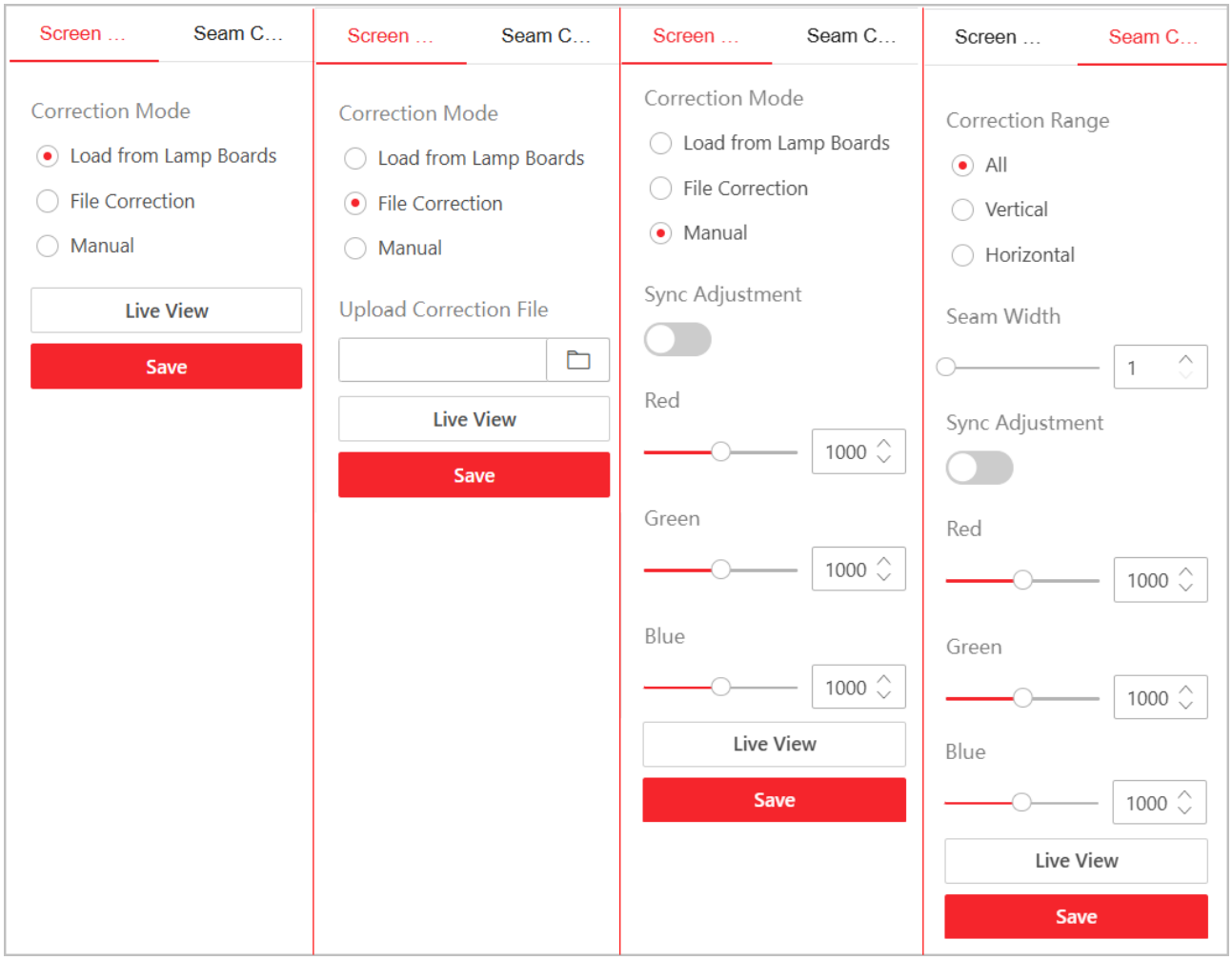

Figure 2-21 Correct AXS Receiving Cards

Step 8 If the display effect still does not meet the requirements, select **File Correction** to upload a locally saved correction file.

Note

Please contact the product supplier to obtain the correction file and save the correction file locally.

Step 9 When the desired display effect is reached, click **Save**.

Step 10 (Optional) You can perform the following operations as required:

- If the correction data do not meet the requirements, click **Clear Correction Data**, select the screen areas, and click **OK**.
- To export the correction data, click **Export Correction Data**, select the screen areas, and click **OK**.

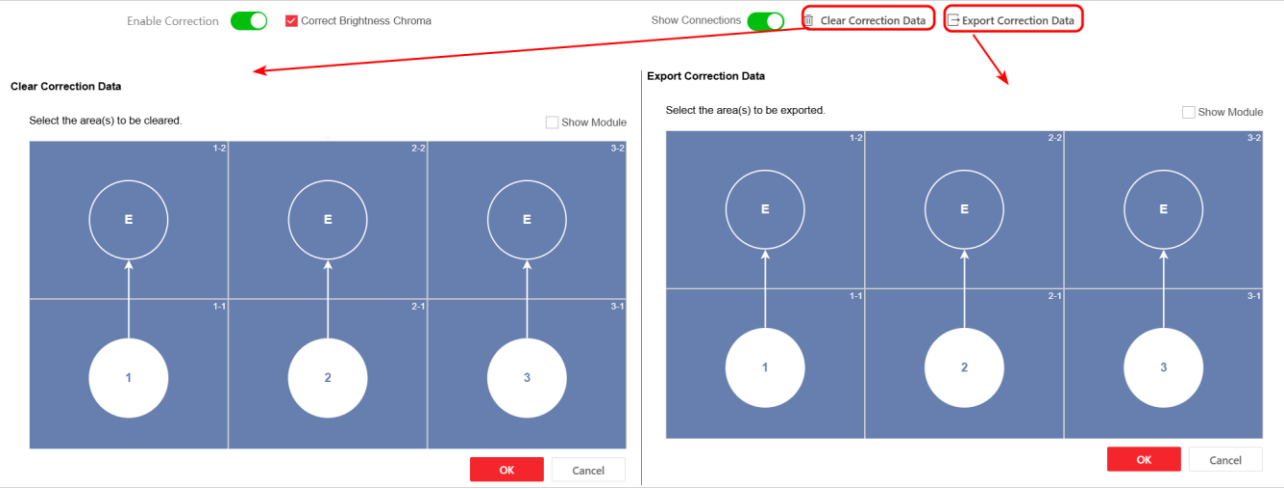

Figure 2-22 Clear/Export Correction Data

2.5.2 Configure Display Effect

When the device is equipped with multiple LED controller boards whose output ports are bound to the same video wall, these LED controller boards must use the same display parameters.

Step 1 Go to **Configuration** → **Display Effect**.

Step 2 Select the output port of an LED controller board or enable **Configure All LED Controllers**.

Step 3 Select a preset mode.

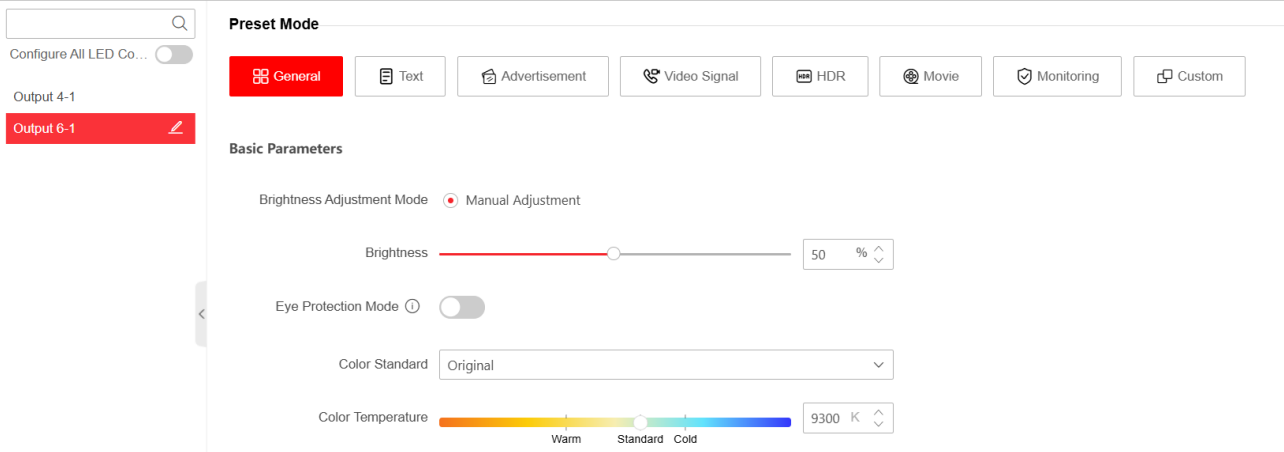

Figure 2-23 Select Preset Mode

Step 4 If the display effect does not meet the requirements, edit the following parameters as required, and then click **Save**.

- Enable **Eye Protection Mode** to reduce brightness and power consumption.
- Adjust the brightness. The manual adjustment is supported by default. To use the automatic adjustment, perform the following steps:
  1) Connect the light sensor to the multi-function card and connect the multi-function card to the LED controller board.

2) Go to **Configuration** → **IoT Configuration** → **Sensors**, select **Light Sensor** for the corresponding channel, and set the sensor quantity.

3) Click  to refresh the sensor settings.

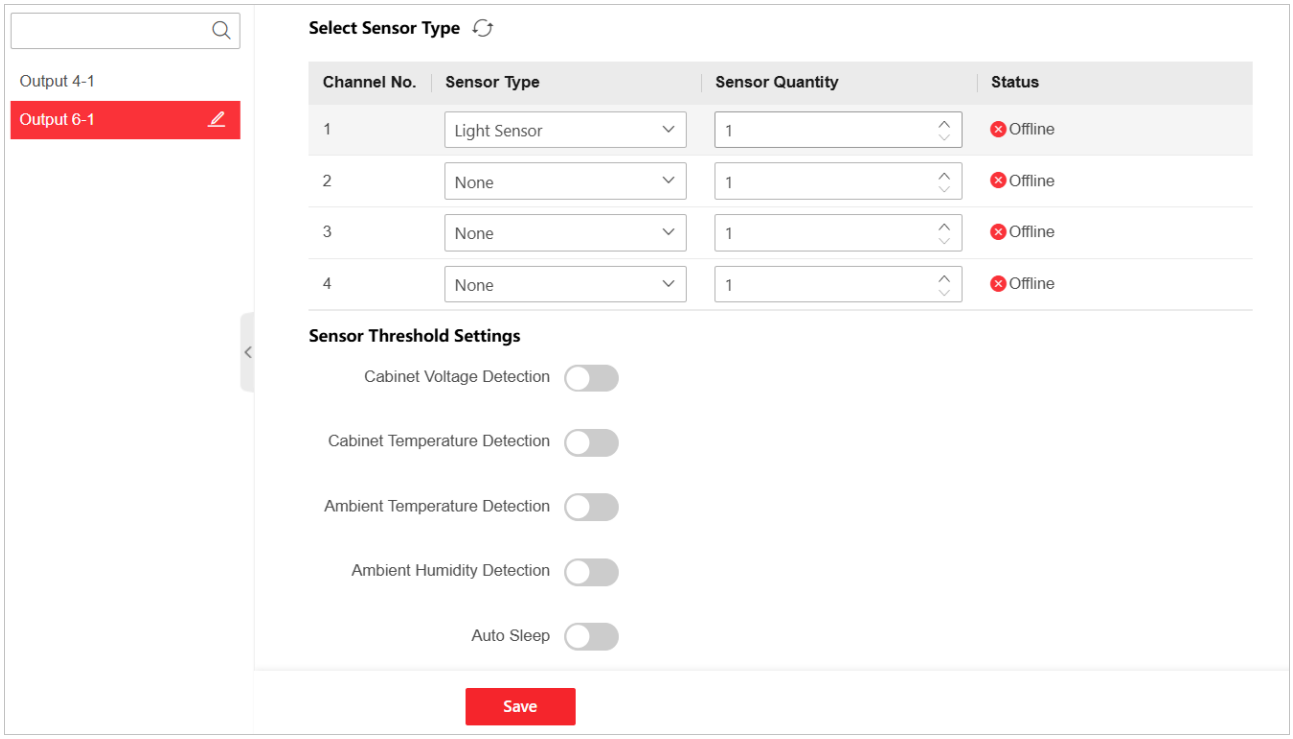

Figure 2-24 Configure Light Sensor

- Choose a color standard.
- Set the color temperature.
- Set the contrast mode.
- Set the Gamma coefficient: A smaller Gamma coefficient makes the low gray areas brighter, while a larger Gamma coefficient makes the low gray areas darker.
- Set the ambient light: When the ambient light is brighter, set a higher ambient brightness value.
- When low gray effect is abnormal, adjust the initial brightness level.
- When the low gray effect is poor, increase the initial brightness value.
- Enable **Gray Scale Optimization** to make the screen gray display more uniformly. This feature is supported by only some receiving cards.

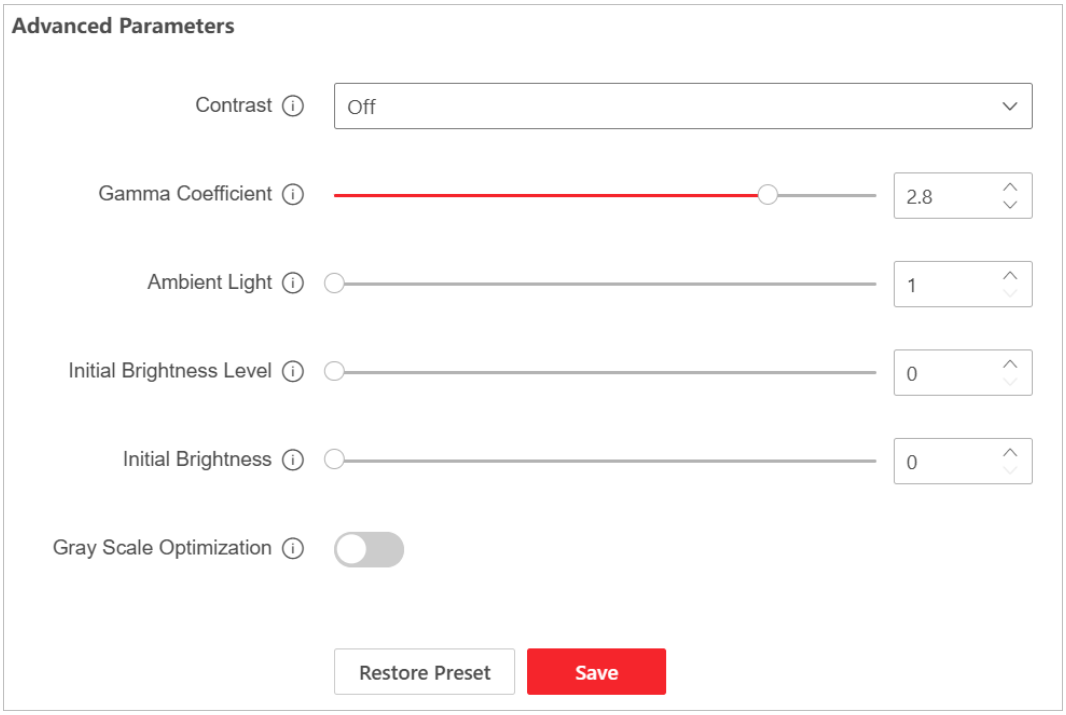

Figure 2-25 Set Advanced Image Parameters

Step 5 (Optional) Click **Restore Preset** to restore the default parameters of the selected preset mode.

2.5.3 Configure Loading Mode

Step 1 Go to **Configuration** → **Loading Mode**.

Step 2 Select the output port of an LED controller board or enable **Configure All LED Controllers**.

Step 3 Set a loading mode and click **Save**.

- Self-adaptive loading mode: By default, the LED controller board uses the self-adaptive loading mode. If you use this mode, the LED controller board automatically switches between standard loading and mini loading based on the network port loading capacity.
- Standard loading mode: Select this mode when the total load of the LED controller board does not exceed 10.4 MP and the per-port load of the board exceeds 0.65 MP and does not exceed 2.925 MP. If you select this mode, the device will compress the images.
- Mini loading mode: Select this mode when the per-port load of the LED controller board does not exceed 0.65 MP. If you select this mode, the device will not compress the images.

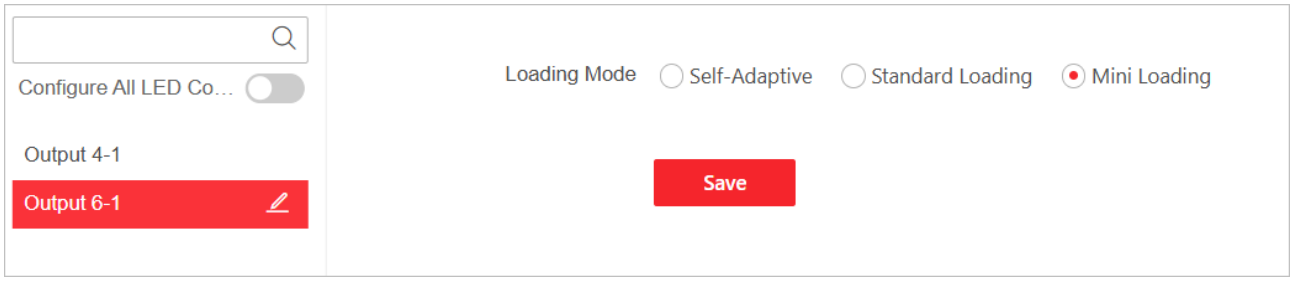

Figure 2-26 Configure Loading Mode

Note

- Loading mode does not support batch configuration.
- To use the standard loading mode, ensure that both the LED controller boards and the receiving cards support standard loading mode.
- When the device is equipped with multiple LED controller boards whose output ports are bound to the same video wall, those LED controller boards must use the same loading mode.

2.5.4 Configure Auto Dehumidification

When the device is equipped with multiple LED controller boards whose output ports are bound to the same video wall, those LED controller boards must use the same dehumidification parameters.

Step 1 Go to **Configuration** → **IoT Configuration** → **Dehumidification** and select the output port of an LED controller board.

Step 2 Enable **Auto Dehumidification** and set the dehumidification parameters.

Step 3 Select the region according to the actual humidity condition of the device location. If you select **Custom**, set the time step, brightness step and duration.

- Time Step: The time interval between two consecutive brightness adjustments by the LED controller during a single dehumidification process. If the brightness is adjusted every 5 minutes, the time step is 5 minutes.
- Brightness Step: The minimum change in brightness for each adjustment by the LED controller during a single dehumidification process. If the brightness increases by 1 each time, the brightness step is 1.
- Duration: The total time of a single dehumidification process.
- Usage Rate: The usage rate of the device.

Step 4 Click **Save** or **Save and Start**.

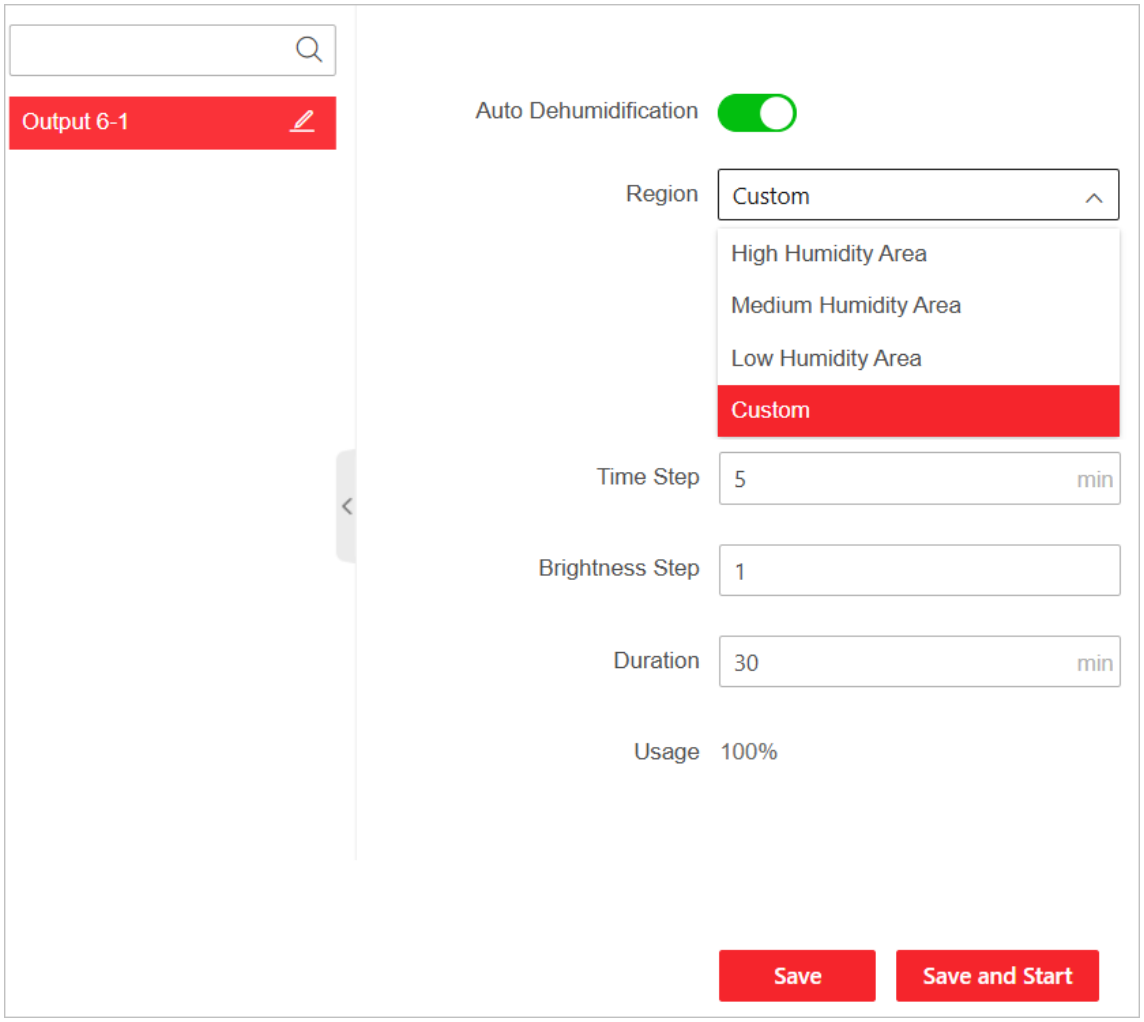

Figure 2-27 Configure Auto Dehumidification

2.5.5 Configure Sensors

Go to **Configuration** → **IoT Configuration** → **Sensors** and select the output port of an LED controller board. You can monitor the following parameters and click **Save**. When a parameter reaches its threshold, the alarm will be triggered on the screens and the parameter value will be shown on the screens.

- Some receiving cards support detecting the cabinet voltage and cabinet temperature. Enable **Cabinet Voltage Detection** and **Cabinet Temperature Detection**, and set the thresholds.
- When the LED controller board is connected to the multi-function card, and the multi-function card is connected to the temperature and humidity sensor, you can monitor the environmental temperature and humidity.

1) Select **Temperature and Humidity Sensor** for the corresponding channel and set the sensor quantity.
2) Click to refresh the sensor settings.
3) Enable **Ambient Temperature Detection** and **Ambient Humidity Detection**, and set the thresholds.

- When the LED controller board is connected to the multi-function card, and the multi-function card is connected to the human body sensor, you can set the auto sleep function.

1) Select **Human Body Sensor** for the corresponding channel and set the sensor quantity.
2) Click  to refresh the sensor settings.
3) Enable **Auto Sleep**.
4) Set the time after which the screen brightness decreases, the OSD prompt appears, and the screens enter sleep mode.

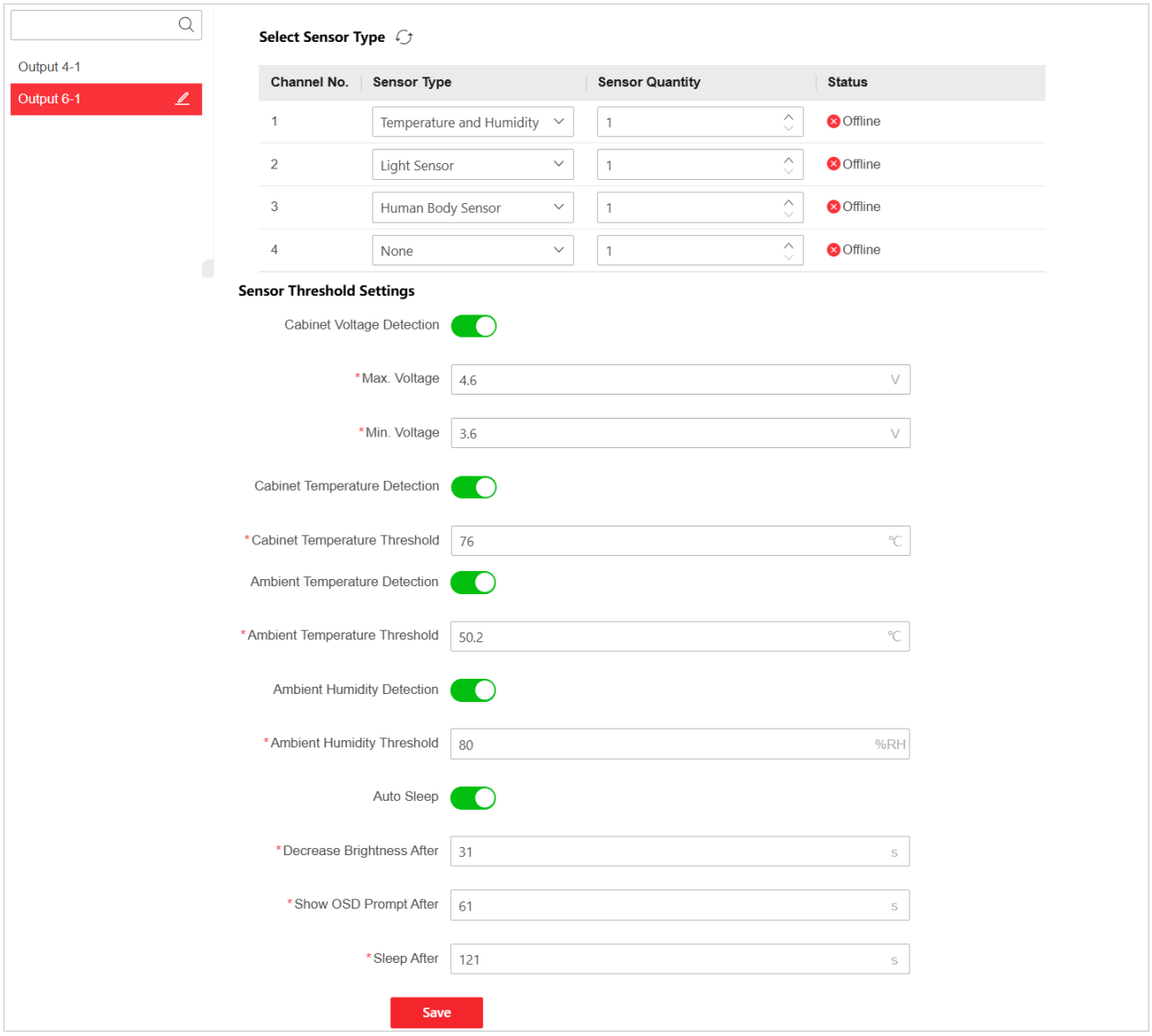

Figure 2-28 Configure Sensors

2.5.6 Configure Power Distribution Cabinets

When the LED controller board is connected to the multi-function card, and the multi-function card is connected to the distribution cabinet, you can control the status of the power distribution cabinet remotely.

Go to **Configuration** → **IoT Configuration** → **Power Distribution Cabinet** and select the output port of an LED controller board. You can use either of the following methods to remotely control the power distribution cabinet and click **Save**.

- Set immediate power on or power off:
  - Enable the circuit that is connected to the power distribution cabinet to power on the power distribution cabinet. Disable the circuit to power off the power distribution cabinet.
  - (Optional) When one multi-function card is connected to multiple power distribution cabinets, it is recommended to enter the device name.

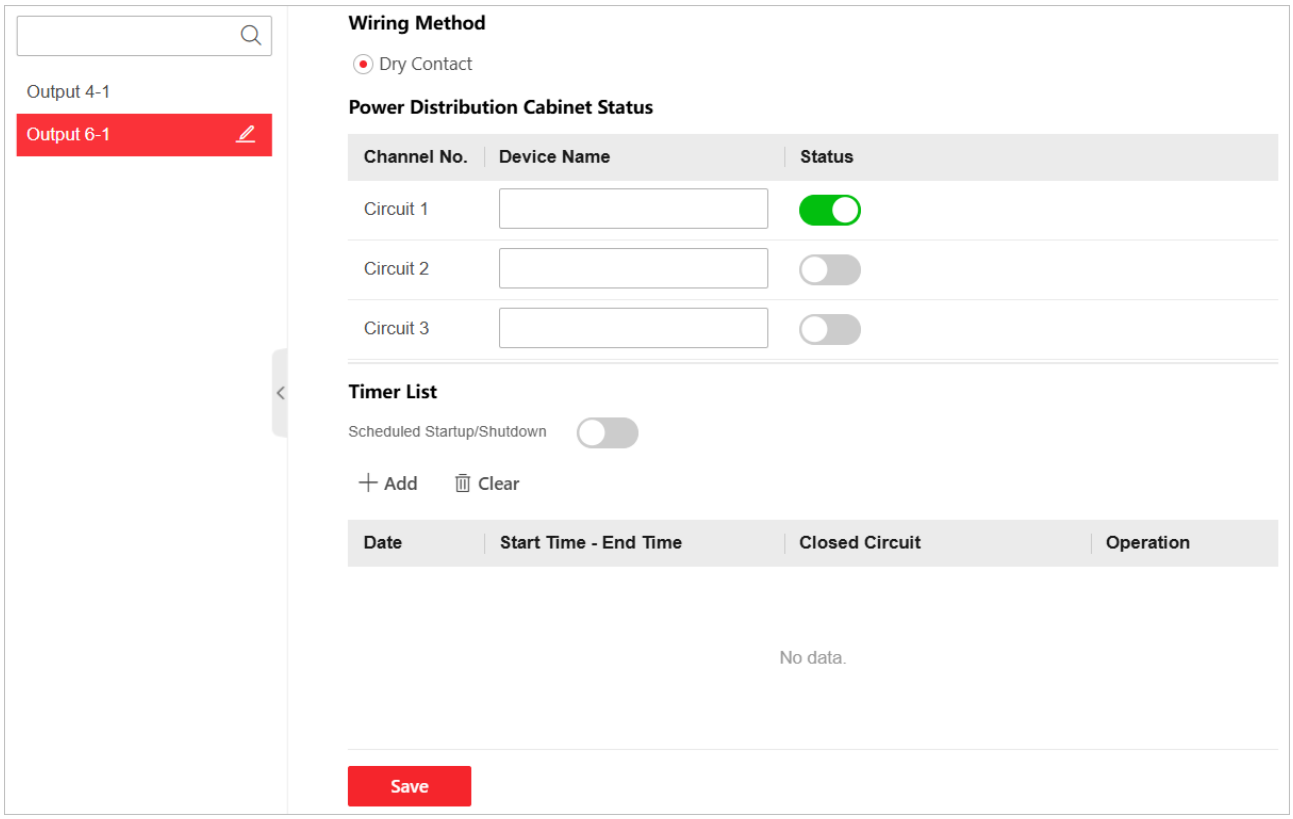

Figure 2-29 Set Immediate Power On/Off

- Set scheduled startup or shutdown:
  1) Click **Add** to add the timer and click **Save**.
  2) Enable **Scheduled Startup/Shutdown**.

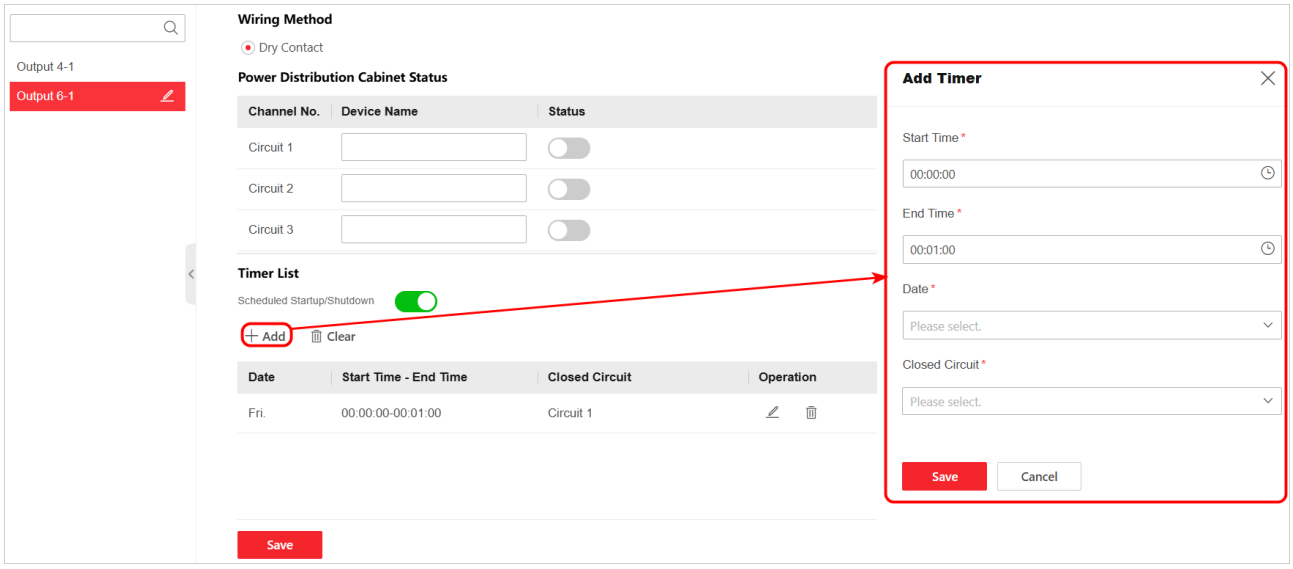

Figure 2-30 Set Scheduled Startup/Shutdown

Chapter 3 Video Wall Management

3.1 Configure a Video Wall

3.1.1 Configure the Video Wall Scale

Step 1 Go to **Video Wall Configuration** and click **Configure**.

- Click  to edit the video wall name.
- Click  to delete the video wall.
- Click **Add** to add a new video wall.

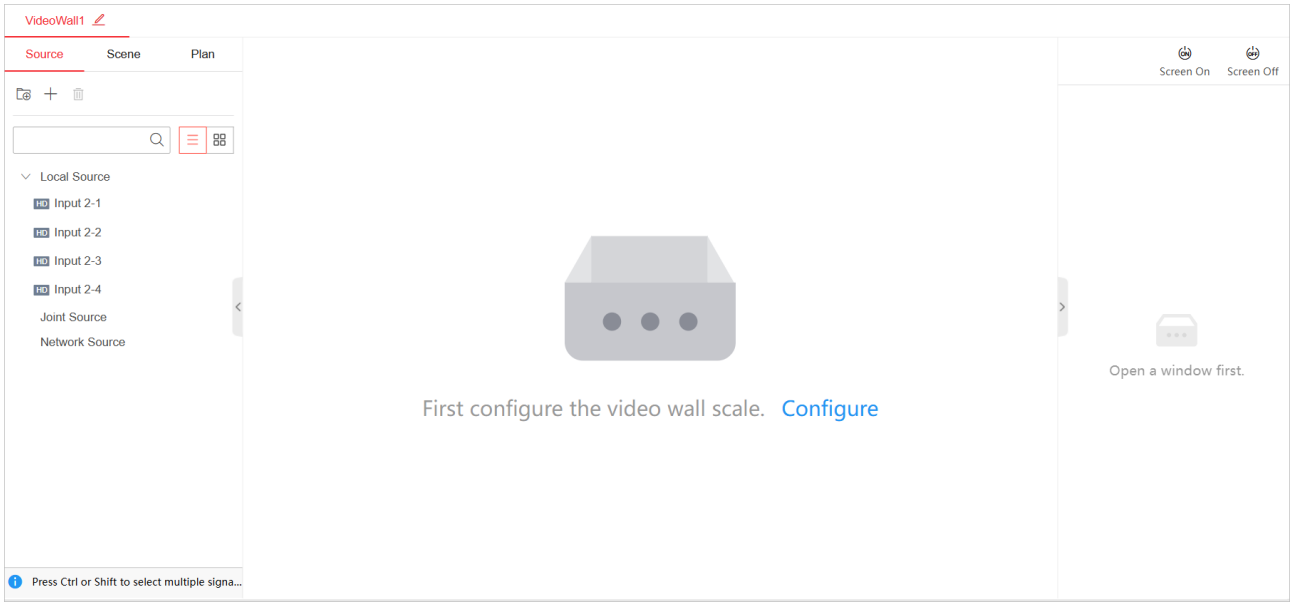

Figure 3-1 Video Wall Configuration Page

Step 2 Set the video wall name.

Step 3 According to the actual screen type, select the video wall type. You can select LCD or LED.

Step 4 Choose either of the following methods to set the video wall scale:

- Directly enter the row number and column number.
- Move the mouse and click the left button to select the screen area.
- To edit the video wall scale, directly enter a new row number and a new column number.
- To edit the video wall scale, click **Clear**, move the mouse, and then click the left button to select the screen area.

Step 5 Select a decoding output resolution, and click **Save**.

- For an LCD video wall, select a defined resolution. Thus, all LCD screens of the current video wall use the selected resolution.
- For an LED video wall, select a defined resolution or select **Custom**, and then enter the row height and column width. If you select a defined resolution, the entered row height and column width cannot exceed the selected defined resolution. After entering the row height and column width, the height of the same row and width of the same column are the same.

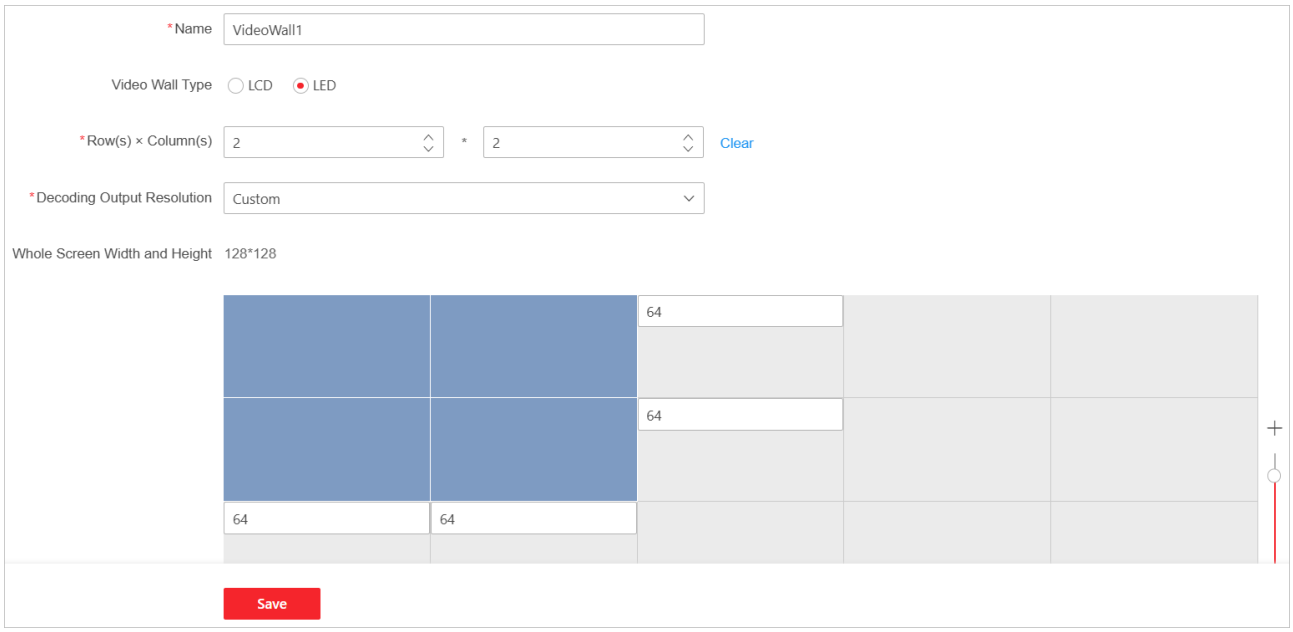

Figure 3-2 Select a Decoding Output Resolution

Step 6 (Optional) To set an LED video wall that uses varied height of the same row or varied width of the same column, set the special resolution.

1) Go to **Configuration** → **Other Settings** → **Display Settings** and enable special resolution.

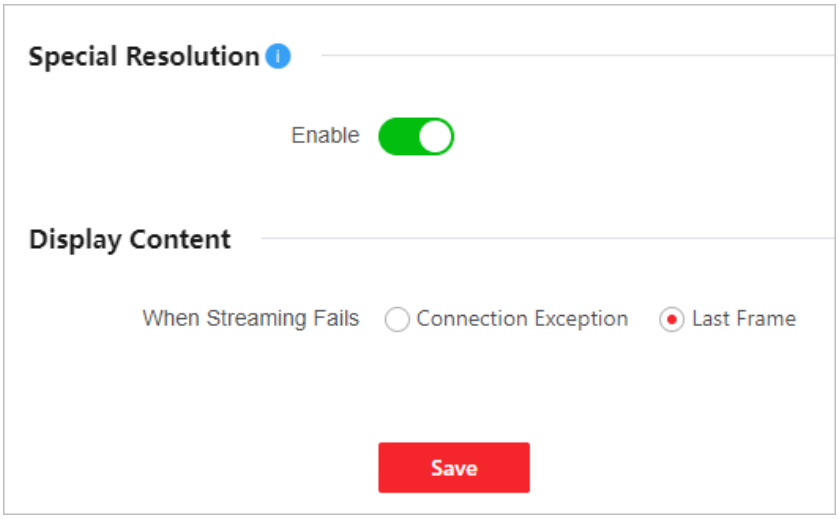

Figure 3-3 Enable Special Resolution

2) Select a defined resolution or select **Custom**, enter the row height and column width.

– If you select a defined resolution, the entered row height and column width cannot exceed the selected defined resolution.

– You can click  to copy the value to the same row or column.

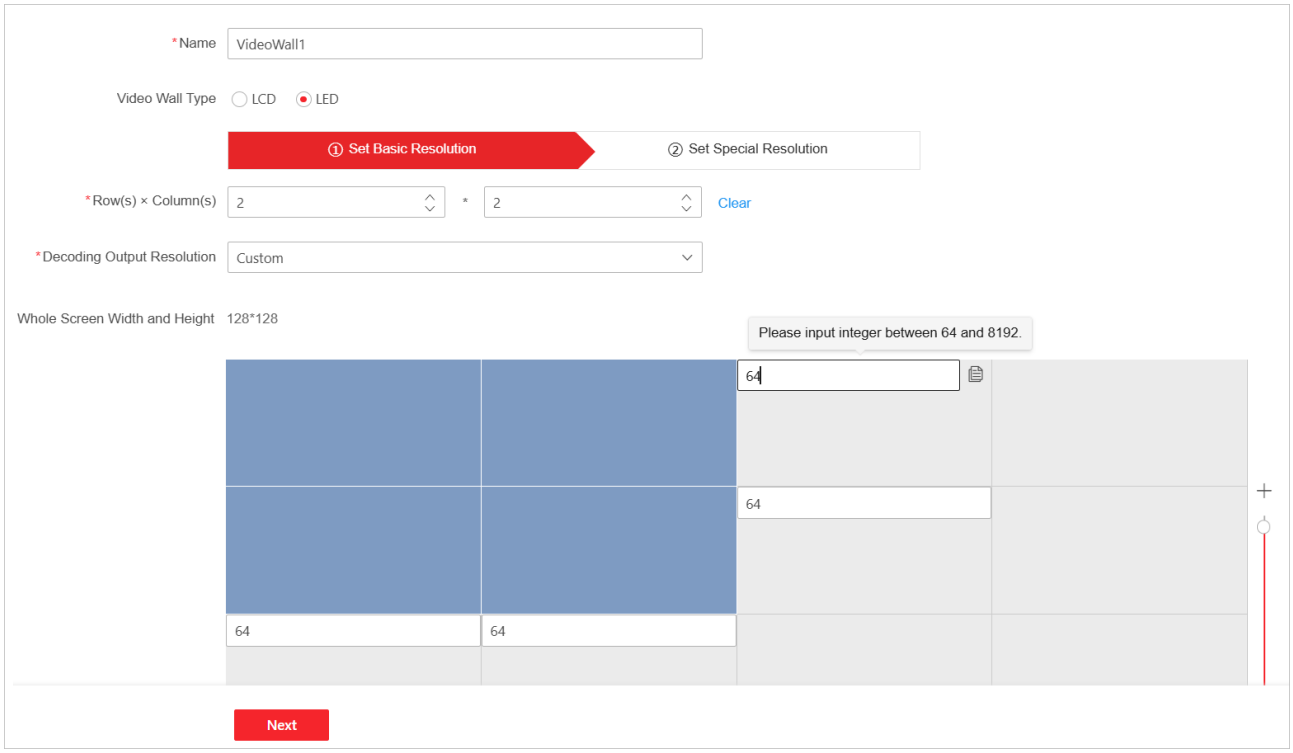

Figure 3-4 Set the Basic Resolution

3) Click **Next**.

4) Press and hold the left mouse button to select the first row, first column, last row, or last column, enter the column quantity, row quantity, row height, or column width, and then click **OK**.

– The total resolution of the selected area cannot change.

– Merging rows or columns reduces the number of screens on the current video wall, so you need to increase the column width or row height.

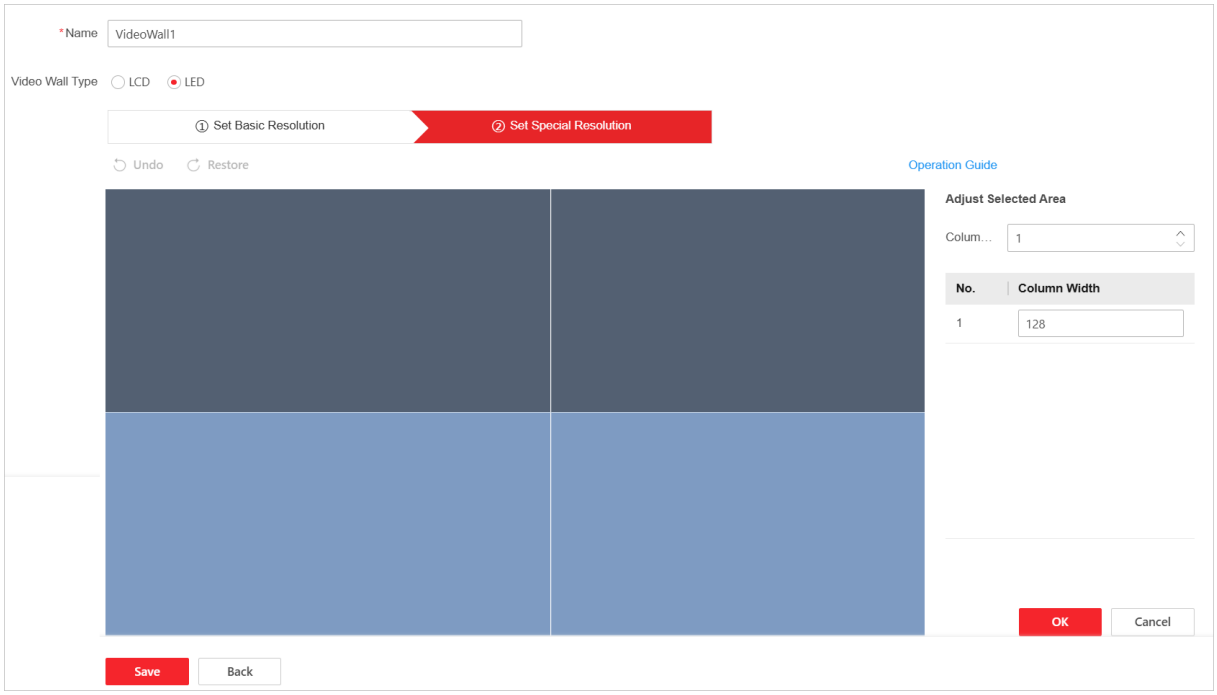

Figure 3-5 Set Special Resolution

5) Click **Save**.

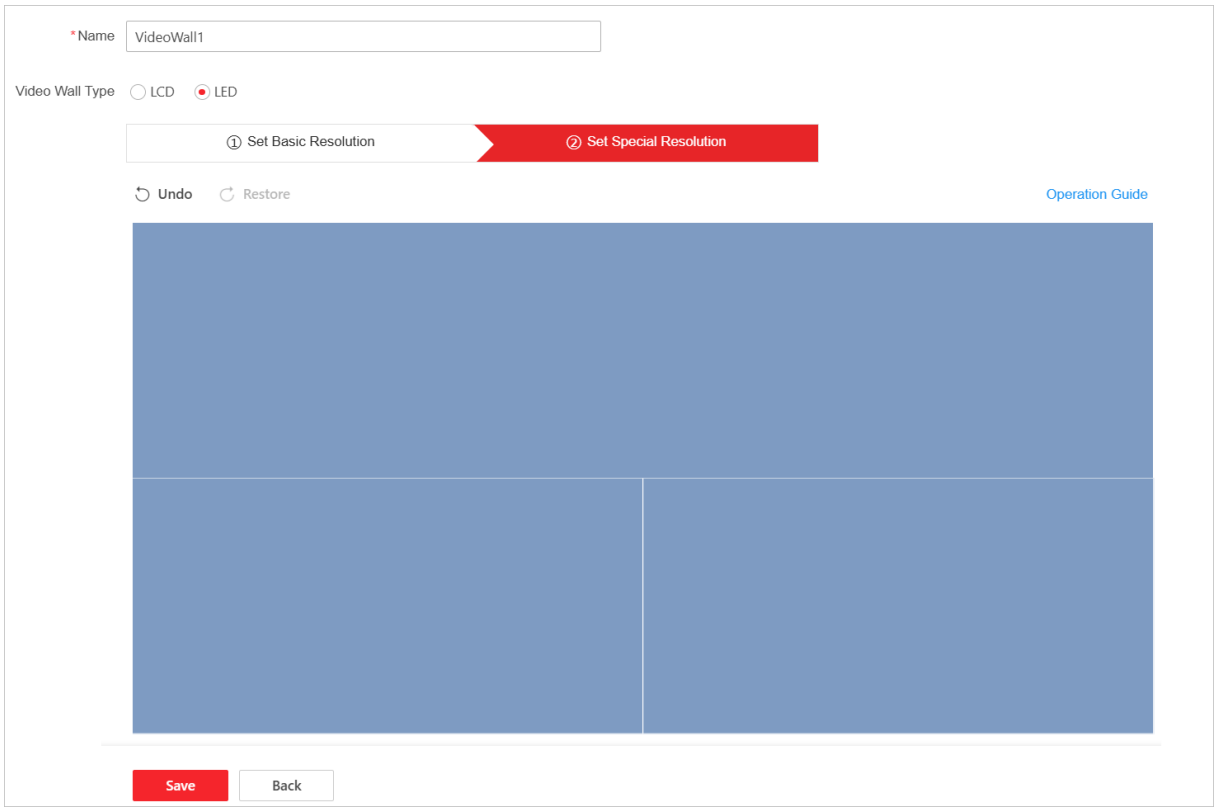

Figure 3-6 Save Special Resolution

Step 7 (Optional) After setting the video wall scale, you can click **Edit Video Wall Scale** to change the video wall scale.

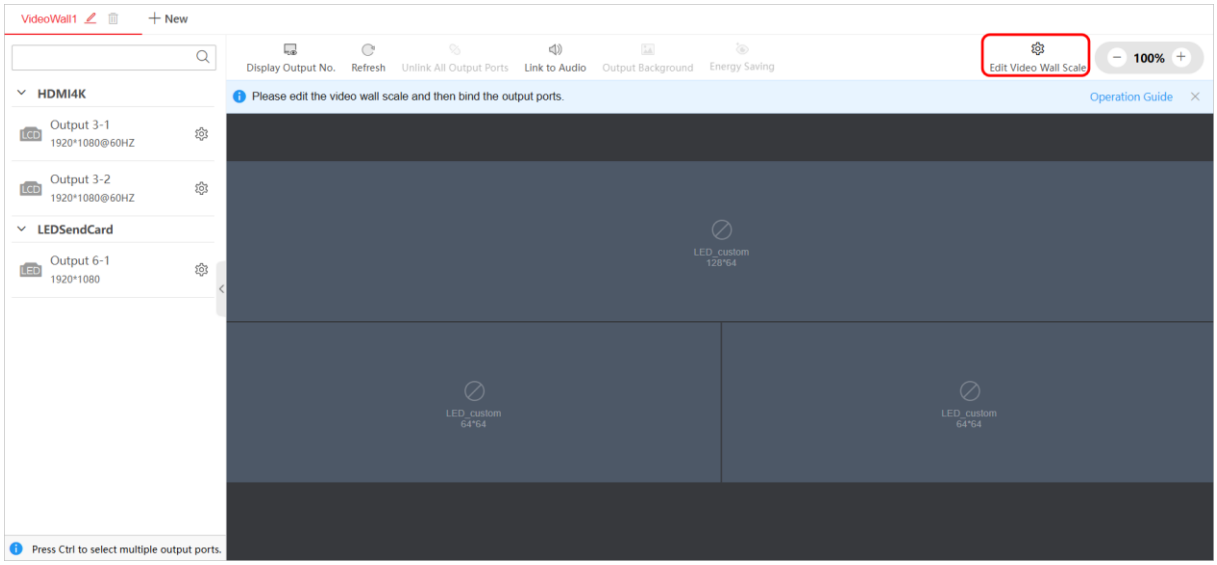

Figure 3-7 Edit the Video Wall Scale

3.1.2 Configure the Output of a Video Wall

Edit the Output Port Parameters

On the **Video Wall Configuration** page, click ⚙ of an output port of an output board to configure the following items:

- Customize the name.
- Edit the output mode of an HDMI output port: By default, the HDMI mode is used. For better compatibility, you can change it to DVI mode.
- Copy the current HDMI output configuration to other output ports: Click **Copy To** and then select the output ports.

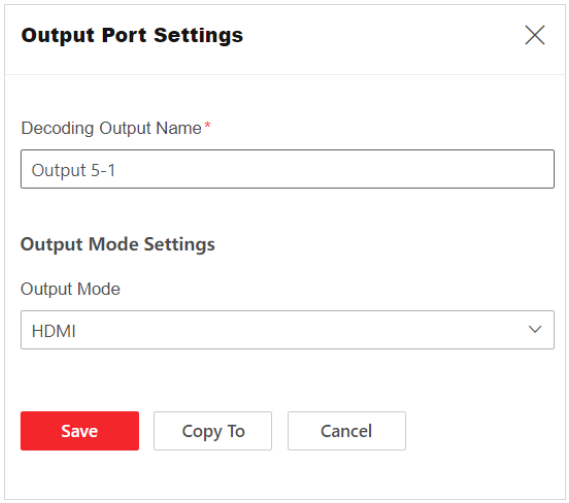

Figure 3-8 Configure HDMI Output Port

Bind Output Ports with Video Wall

A video wall can contain one screen or multiple screens. At a time, one screen can join only one video wall, and one output port can be bound with only one screen.

Step 1 On the **Video Wall Configuration** page, click **Display Output No.** to display the output port number on the actual screen.

Step 2 According to the output number shown on the actual screen, drag the corresponding output ports to the screens of the video wall.

- To batch bind output ports with the video wall, press **Ctrl** to select multiple output ports and drag the output ports to the screens of the video wall.
- To cancel the linkage between a screen and an output port, click  in the upper right corner of the screen.
- To cancel the linkage between all screens and output ports, click **Unlink All Output Ports**.

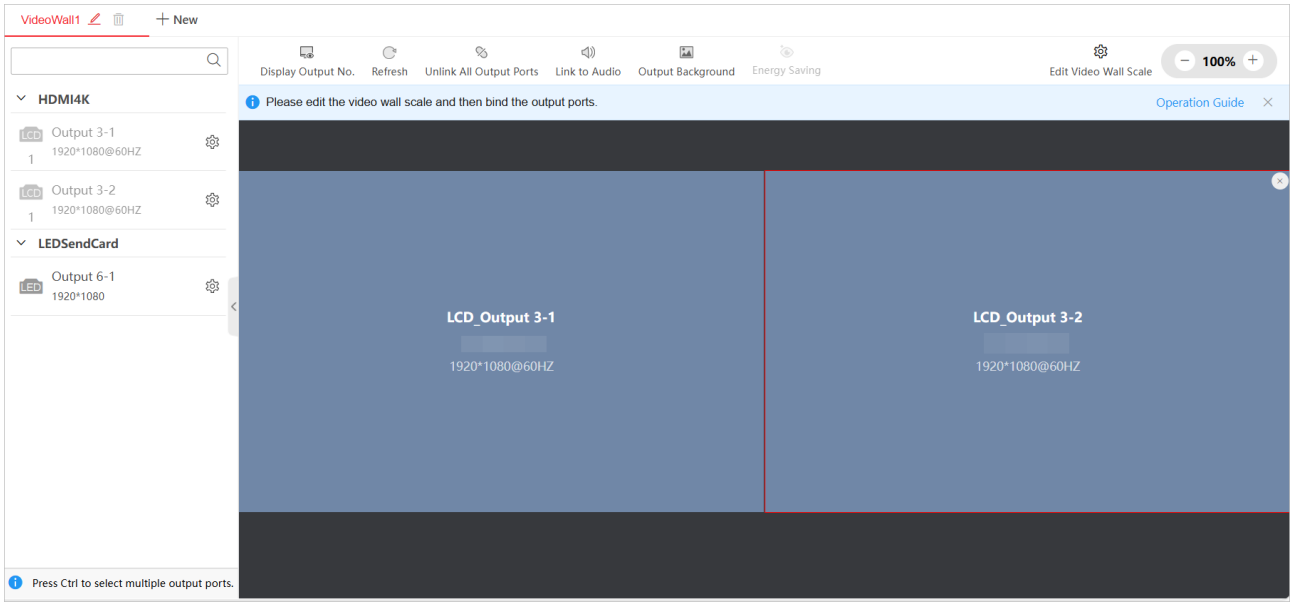

Figure 3-9 Bind Output Ports with Video Wall

Step 3 (Optional) If the screens that are used to configure the video wall support control linkage function, you can perform the following operations to auto bind output ports to the screens of the video wall.

1) Make sure all screens are enabled with the control linkage function.
2) Use the remote control to set the location information for all actual screens.
3) Click Edit Wall Scale and select Auto Configure.

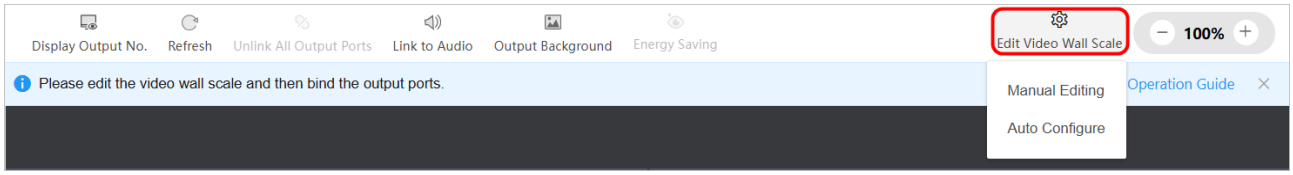

Figure 3-10 Auto Bind Output Ports with Screens

Configure Audio Matrix

If you need to configure multiple audio outputs for a video wall, configure the audio matrix.

Step 1 Go to **Configuration** → **Audio Matrix.**

Step 2 Double click to link the audio input channel and audio output channel.

Double click again or click to unlink.

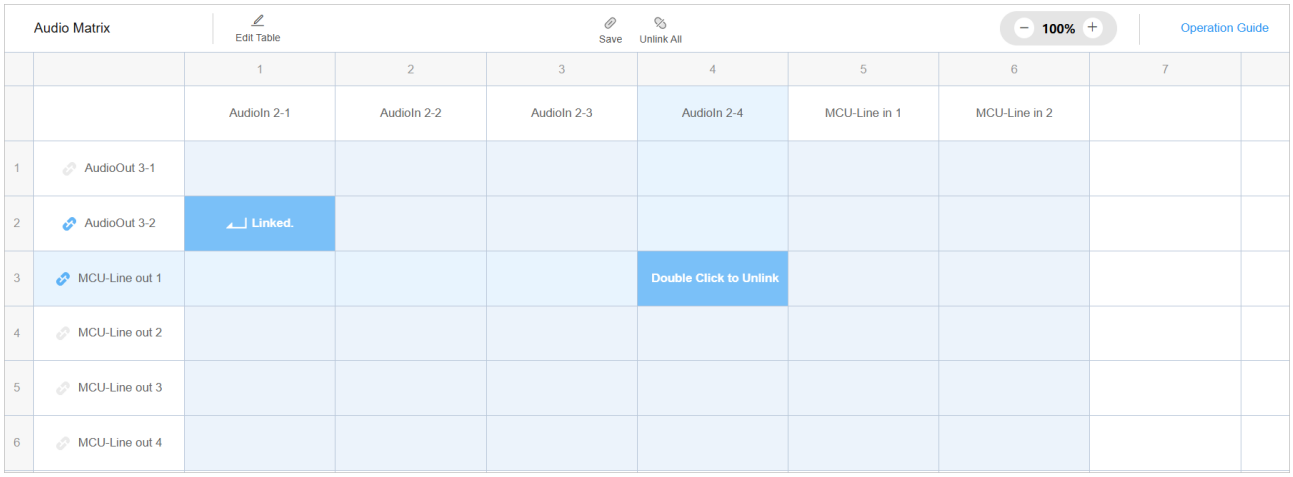

Figure 3-11 Configure Audio Matrix

Step 3 (Optional) You can perform the following operations as required:

- Double click the name of an audio channel to edit its name.
- Click **Edit Table** to customize the audio channel name and configure the displaying of the audio channel in the table.

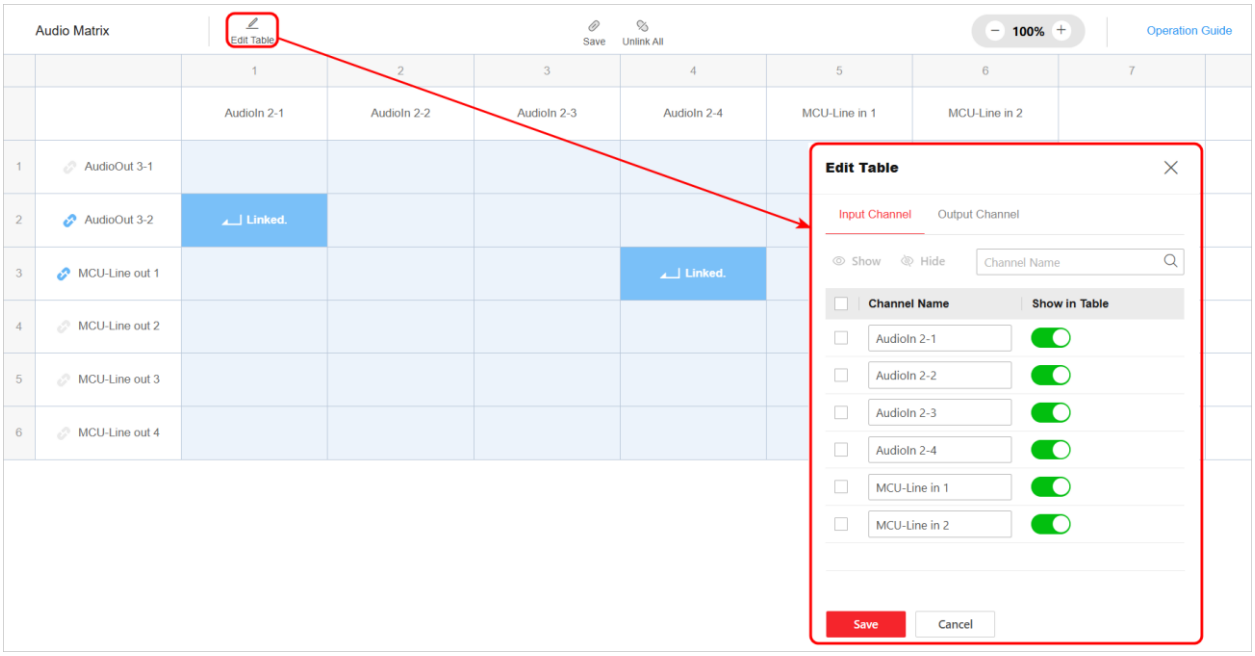

Figure 3-12 Edit Audio Channel Table

- Click **Unlink All** to unlink all audio linkage.

Step 4 Click **Save**.

Configure an Audio Output

On the **Video Wall Configuration** page, click **Link to Audio**. Click  at the upper right corner of an audio output to set it as the audio output of the video wall.

- After setting the audio output of a video wall, you need to go to the **Video Wall Operation** page to enable audio to allow the audio output.
- One video wall can be linked with only one audio output.

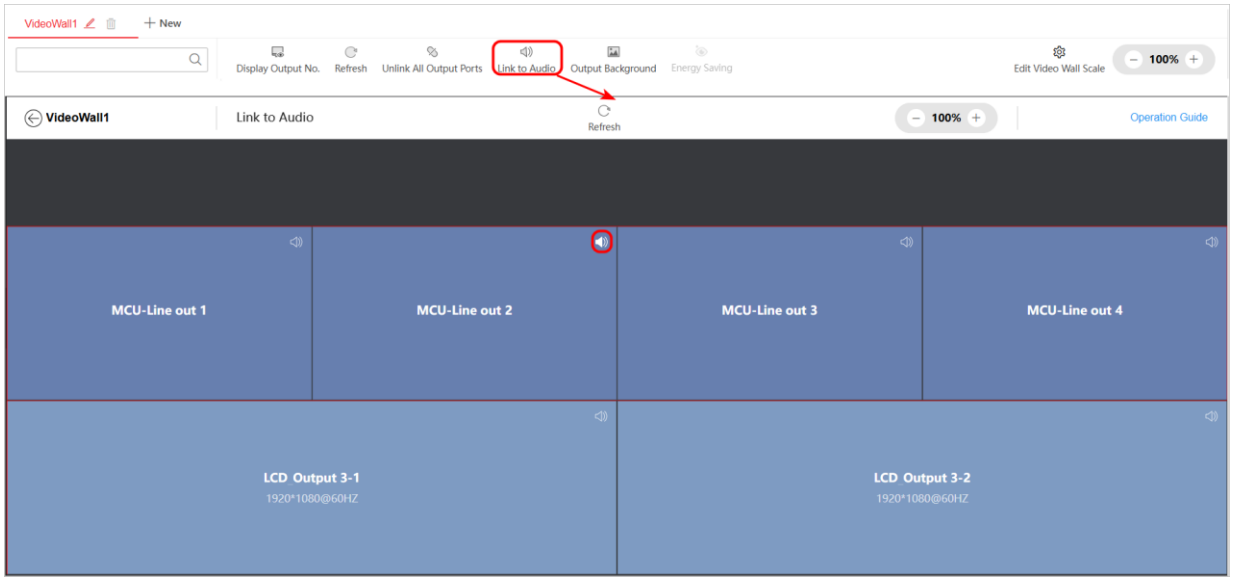

Figure 3-13 Set Output Audio

Configure Other Output Parameters

At the top of the **Video Wall Configuration** page, you can perform the following operations as required:

- The device uses the default background. To change the background, click **Output Background**.
  - When a video wall is bound to an output board, you can select a solid color or import an image as the background.
  - When a video wall is bound to an LED controller board, you can only select a solid color as the background.

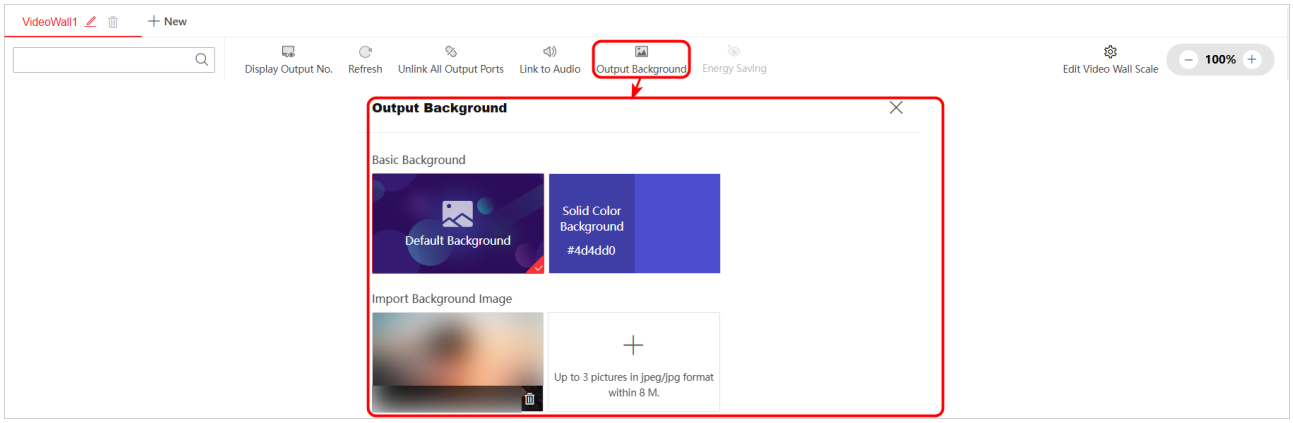

Figure 3-14 Edit Output Background

- Only the LED controller board supports the energy saving function. Bind the output port of an LED controller board to the video wall, click **Energy Saving**, and then enable energy saving and set the strength coefficient.

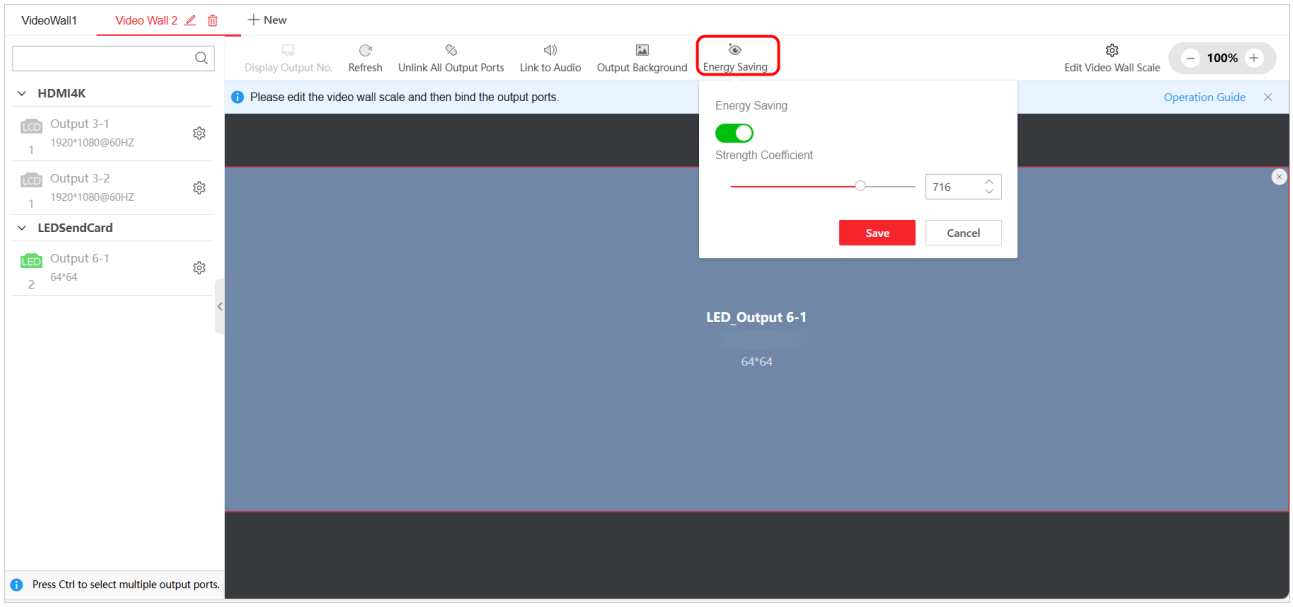

Figure 3-15 Set Eye Protection

- Click **Unlink All Output Ports** to unlink all output ports bound to the selected video wall.
- Click **Refresh** to refresh the information of all output ports.

3.1.3 Configure Signal Sources

Add a Network Signal Source via IP Address

Step 1 Go to **Video Wall Operation** → **Source**, click , and select **IP Address**.

Step 2 Enter the signal source information and stream media information.

- Click **More** to select the transmission protocol, stream type, encrypted stream, device manufacturer, and streaming media information.

After enabling **Get Stream via Streaming Server**, you can perform live view data forwarding through the streaming server to reduce network stress.

- If you add an NVR or IPC that has multiple channels, all channels of the NVR or IPC will be automatically added to the device.

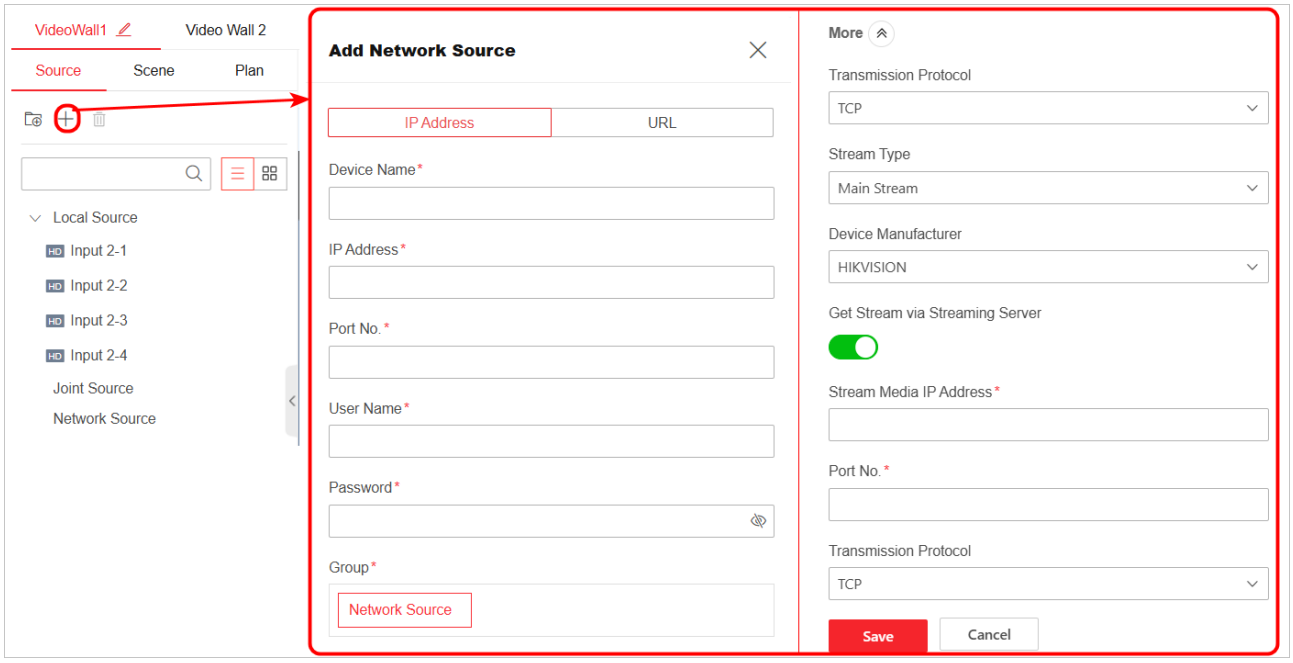

Figure 3-16 Add a Network Signal Source via IP Address

Step 3 Click **Save**.

Add a Network Signal Source via URL Address

Step 1 Go to **Video Wall Operation** → **Source**, click , and select **URL**.

Step 2 Enter the device name and the URL address.

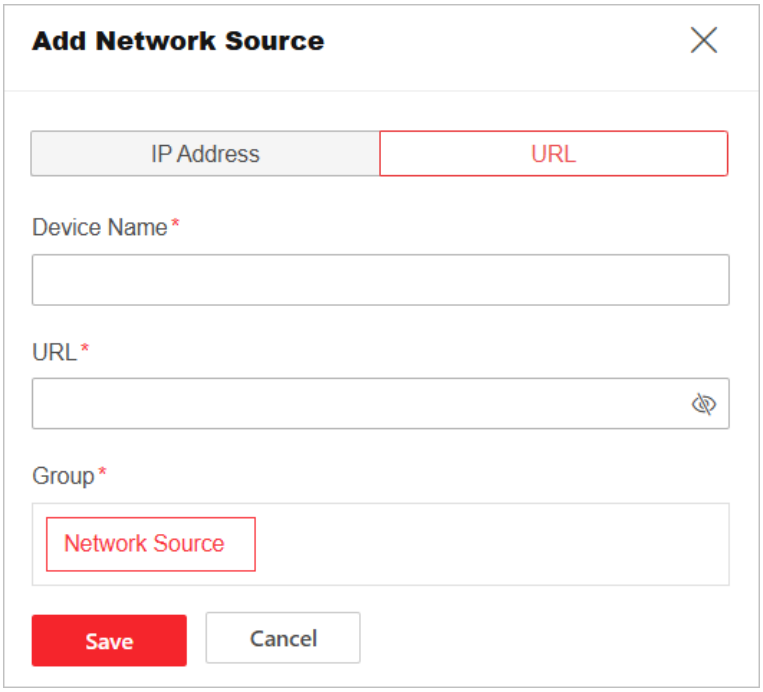

Figure 3-17 Add a Network Signal Source via URL Address

Step 3 Click **Save**.

Batch Delete Network Signal Sources

To batch delete invalid network signal sources, you can select multiple network signal sources with **Ctrl** or **Shift** pressed and then click .

3.1.4 Bind Signal Sources with a Video Wall

Go to **Video Wall Operation** and then select a video wall. Take either of the following methods to bind signal sources with the video wall:

- Select a signal source and then drag it rightward to the video wall.
  - If you bind a signal source to an LCD video wall, the signal source window fully covers a single screen by default.
  - If you bind a signal source to an LED video wall, the signal source window fully covers the LED video wall by default.

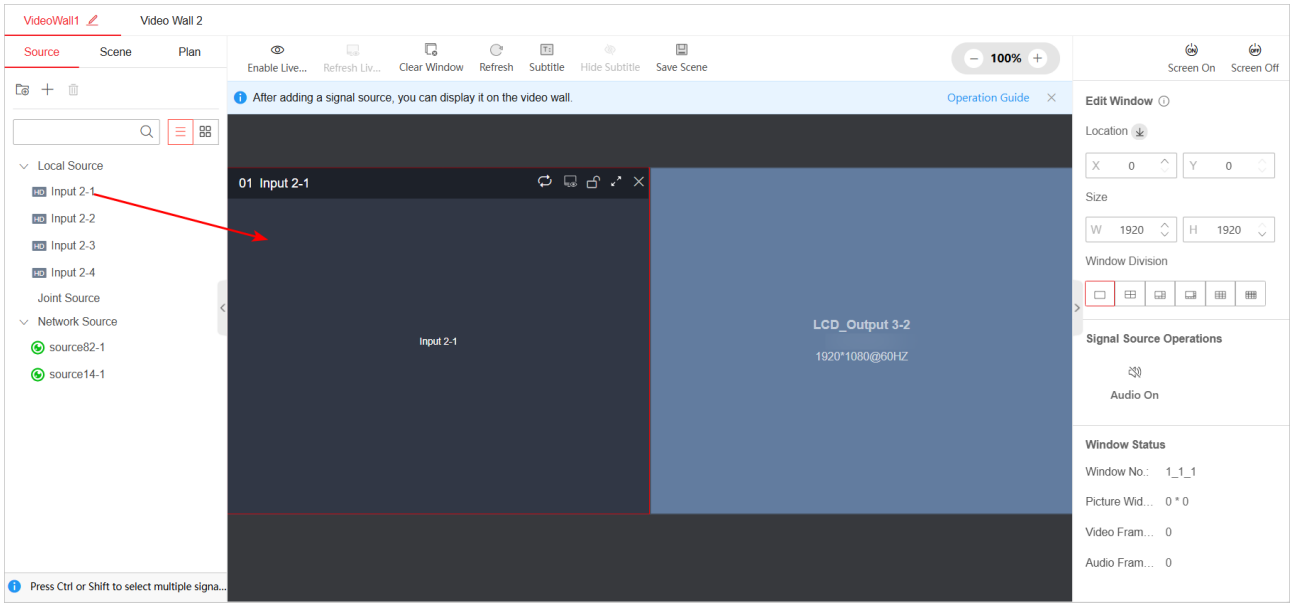

Figure 3-18 Bind a Signal Source to LCD Video Wall

- Drag a default signal source group or a newly created signal source group rightwards to the video wall.
  - Before dragging a network signal source to the video wall, make sure that the decoding board is in the device.
  - To create a new signal source group, see Create a Signal Source Group.
- Batch bind multiple signal sources:
  - Press **Ctrl** or **Shift** to select multiple network signal sources of the same signal source group, and drag signal sources rightward to the video wall.
  - Press **Ctrl** to select multiple local signal sources of the same signal source group, and drag signal sources rightward to the video wall.

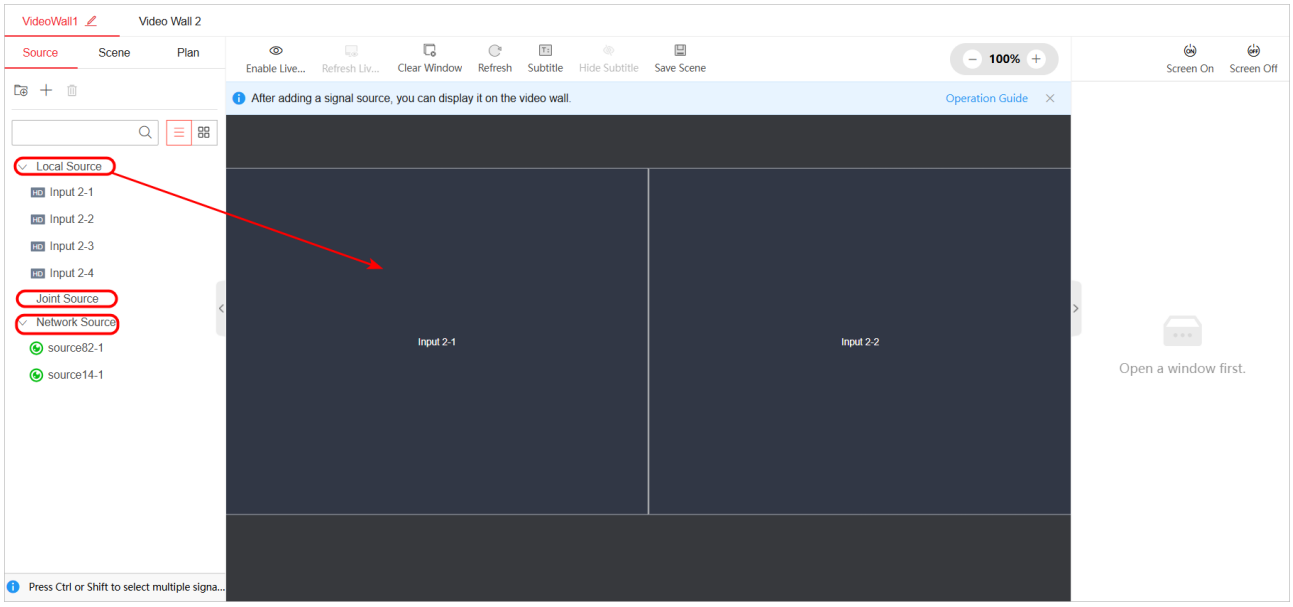

Figure 3-19 Batch Bind Signal Sources to Video Wall

Create a Signal Source Group

Step 1 Click and enter the group name.

Step 2 Click to add multiple signal sources to the created group.

Note

You cannot add the network signal sources together with the local signal sources or joint signal sources to the same signal source group.

Step 3 Click **OK**.

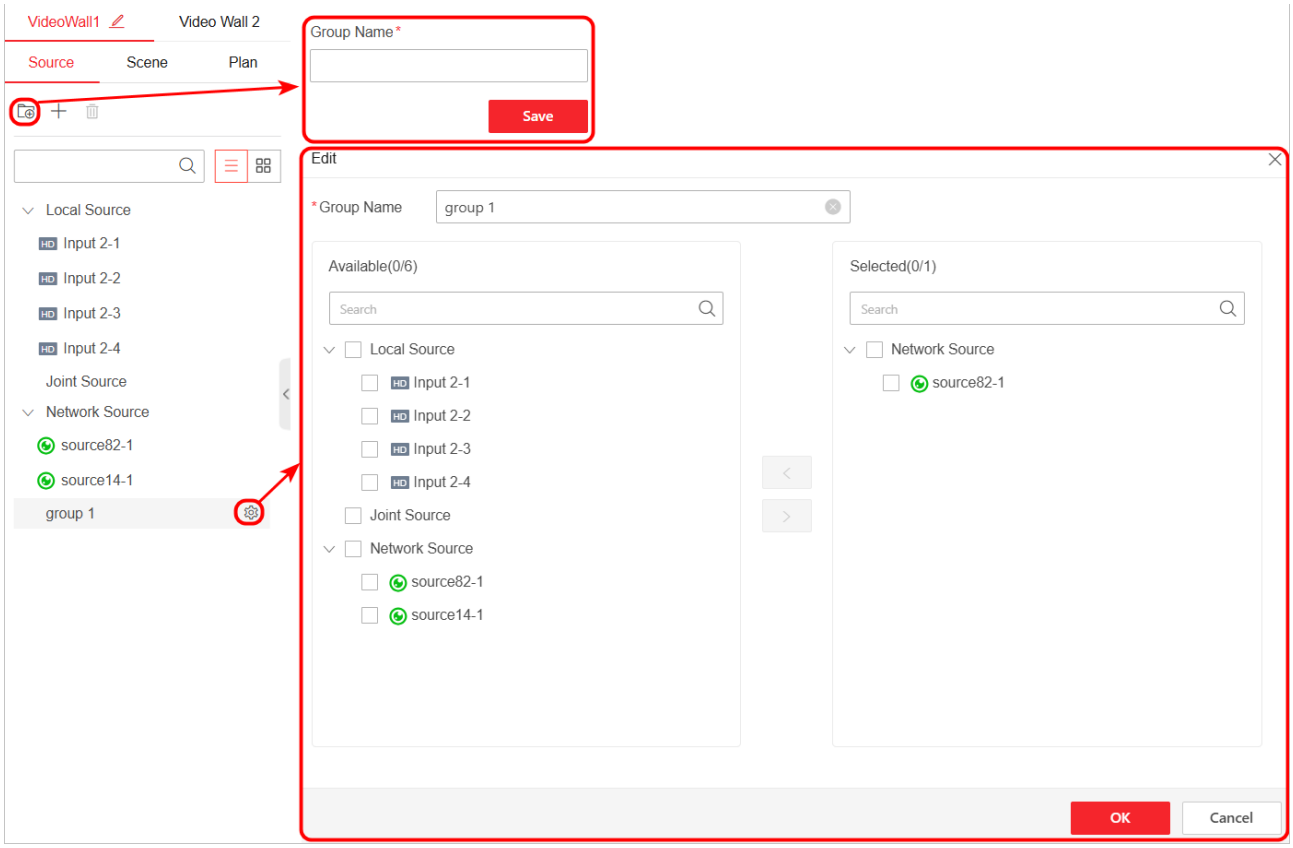

Figure 3-20 Create Signal Source Group

3.2 Operate a Video Wall

3.2.1 Edit Signal Source Window Parameters

Edit a Signal Source Window

On the **Video Wall Operation** page, select a video wall. Select a signal source window and perform the following operations as required:

- Adjust the window position: Move the window directly or enter the specific X and Y values.
- Divide the window: Click a window division icon.
- Adjust the window size:
  - Drag the window edge to adjust its size.
  - Enter W and H values.
  - Click in the upper right corner of the window to make it fully cover the occupied output ports and click to restore the original size.
  - Double click the window to make it fully cover the occupied output ports and double click the window again to restore the original size.
- Set the window to the bottom: Click .

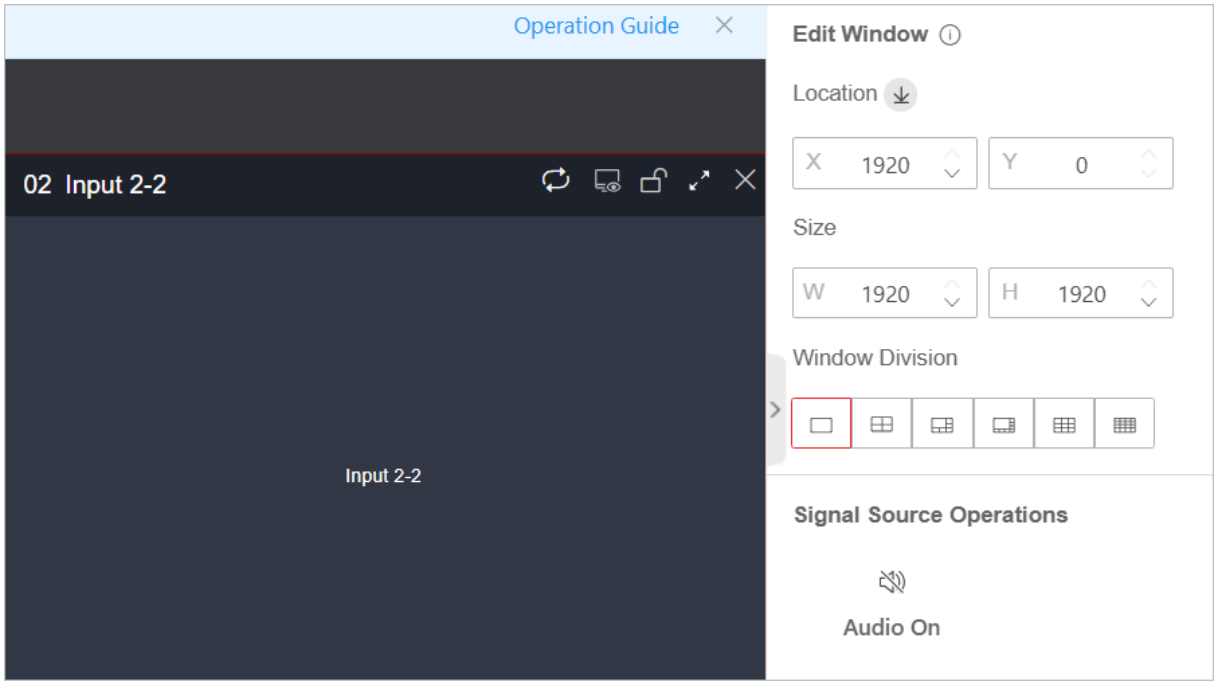

Figure 3-21 Adjust Position of a Signal Source Window

- Enable audio: Make sure that you have configured the audio output for the video wall on the **Video Wall Configuration** page. Click **Audio On**.
- Control a network signal source: Set the decoding delay level and export the stream. After you enable Websocket, you can export stream.

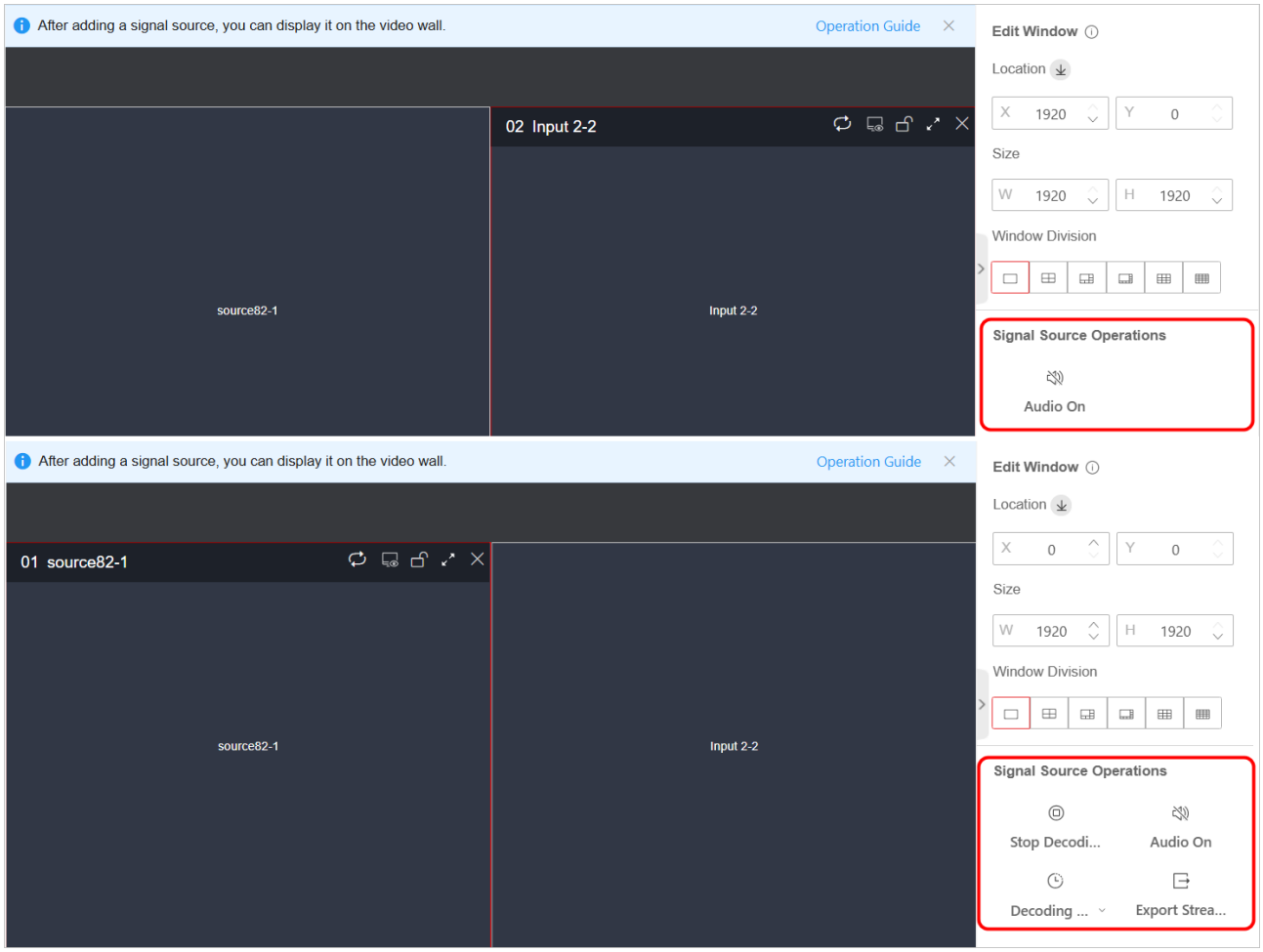

Figure 3-22 Enable Audio

- Set the signal source group auto-switching: Make sure that you have created the network signal source groups. For details, see Create a Signal Source Group. Click  in the upper right corner of the signal source window, select a network signal source group, set the image interval, and then click **Start Auto-Switch**.

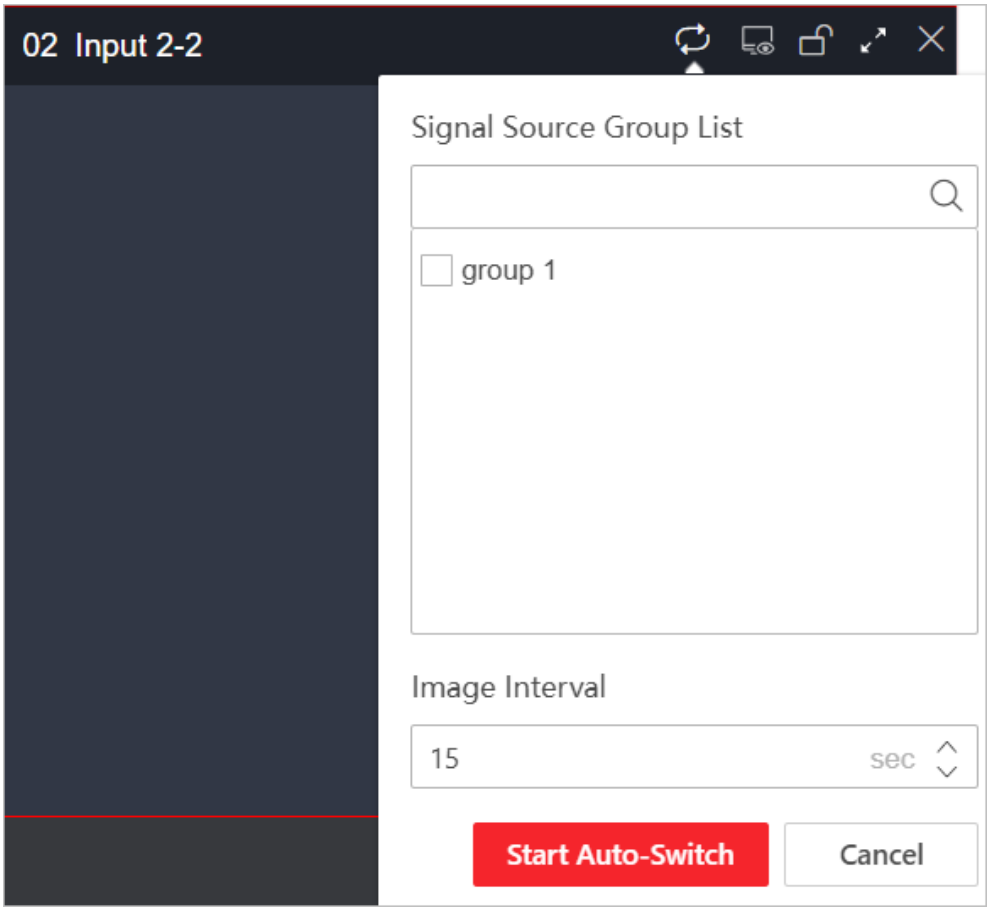

Figure 3-23 Set Signal Source Group Auto-Switching

- Lock the window: Click  .

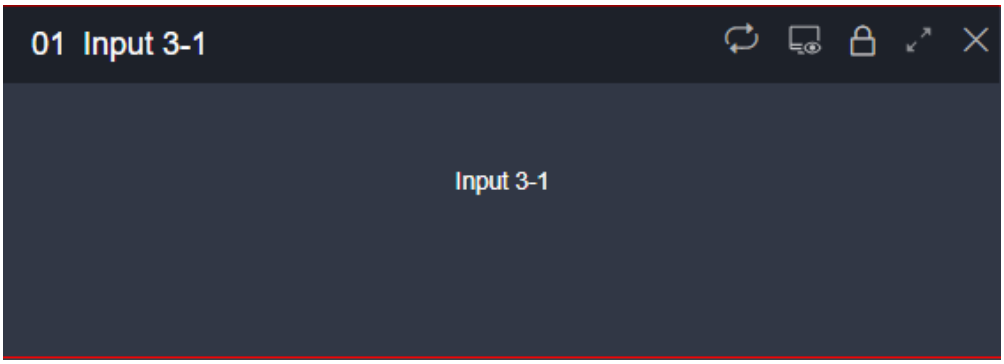

Figure 3-24 Locked Signal Source Window

- View the window status: You can click **Show All** to enter decoding status list to view details.

Edit Multiple Signal Source Windows

On the **Video Wall Operation** page, select a video wall and perform the following operations as required:

- Preview the signal sources:

- Click  in the upper right corner of a signal source window to preview the signal source. Click  to cancel the live view.
- Click **Enable Live View** at the top of the **Video Wall Operation** page to preview all signal sources on the video wall. Click **Close Live View** to stop previewing all signal sources on the video wall.
- Click **Refresh Live View** at the top of the **Video Wall Operation** page to refresh the live view of all signal sources.

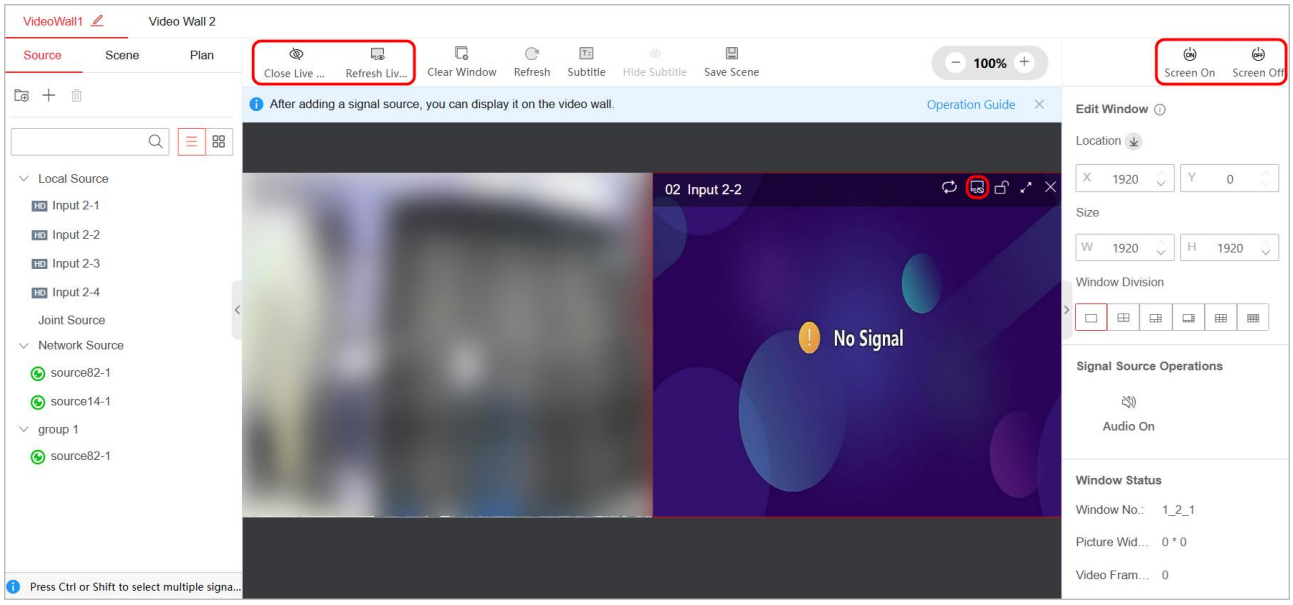

Figure 3-25 Preview Signal Source

Note

Before previewing the network signal sources, make sure that the decoding board is in the device.

- Control all LCD screens of the selected LCD video wall. Make sure that you have configured the serial port. For details, see “5.5.1 Control Screen via Serial Port”.
  - Click **Screen On** to power on all LCD screens.
  - Click **Screen Off** to power off all LCD screens.
- Control all LED screens of the selected LED video wall:
  - Click **Screen On** to wake the LED screens from sleep mode.
  - Click **Screen Off** to put the LED screens into sleep mode.
- Clear all bound signal source windows: Click **Clear Window**.

3.2.2 Edit Signal Source Parameters

Edit a Local Signal Source

Go to **Video Wall Operation**, hover over a local signal source and then click  to edit its parameters:

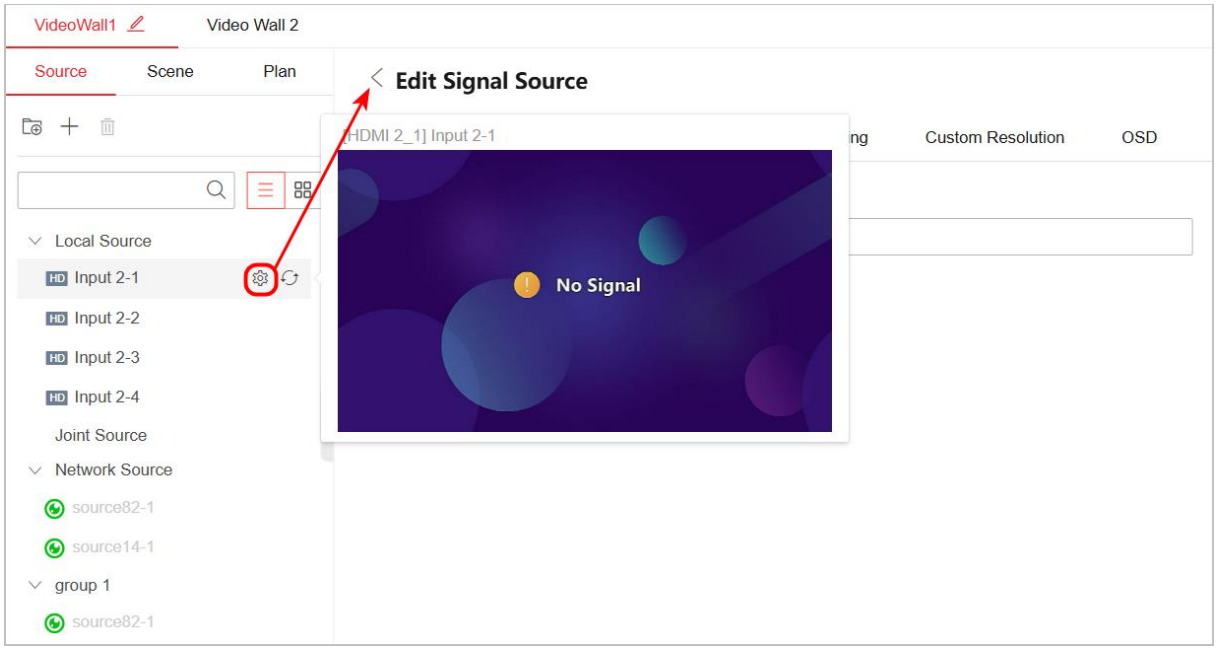

Figure 3-26 Edit a Local Signal Source

- Edit the signal source name.
- Click **Video Param**, select a color mode, and adjust the brightness.

  If you select custom color mode, the video parameters will restore to the default settings after you click **Restore Default** on the **Backup and Reset** page.

Figure 3-27 Set Video Parameters

- Click **Source Clipping**, and set the clipping value at top, bottom, left, and right edges.

  The clipping value ranges from 0 to 200. The clipping value at the top and bottom edges should be a multiple of 2, and the clipping value at the left and right edges should be a multiple of 4.

Figure 3-28 Clip a Signal Source

- If the resolution of a signal source does not match the resolution of the screen, you can customize the signal source resolution.
  1) Click **Custom Resolution**.
  2) Enable custom resolution and set the refresh rate and resolution. The width should be a multiple of 4 and the height should be a multiple of 2.
  3) (Optional) Click **Copy To** to copy the resolution configuration of the current signal source to other signal sources.
  4) Click **Save**.

Figure 3-29 Customize Resolution

- Click **OSD**, and then you can add multiple OSDs (On-Screen Displays) to the input signal image.
  - Overlay the character 1 to the input signal image. Set the content, font size, and font color, and adjust the character position. You can enter the position values or directly drag the character to adjust the position.
  - Overlay the character 2 to the input signal image. Set the content, font size, and font color, and adjust the character position. You can enter the position values or directly drag the character to adjust the position.
  - Click **Copy To** to copy the OSD configuration of the current signal source to other signal sources.

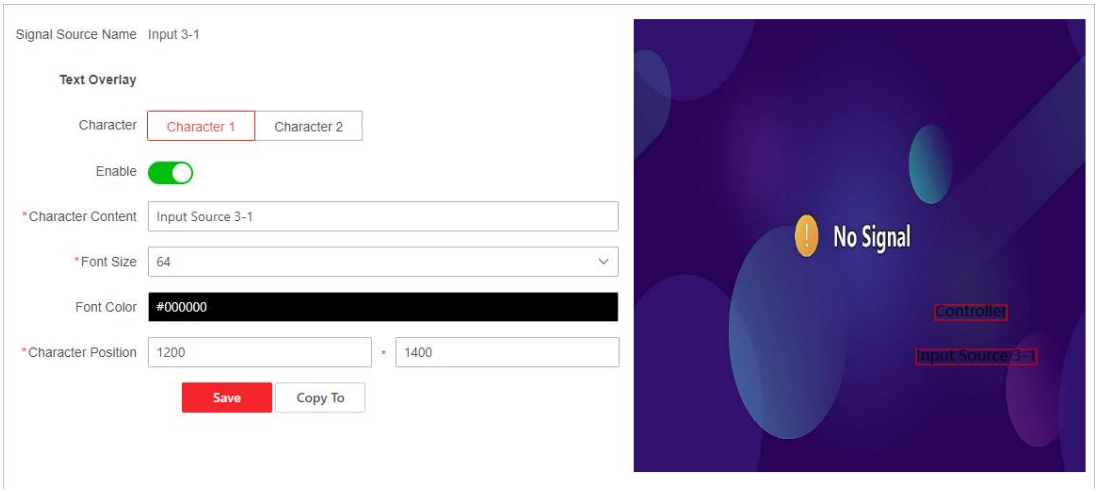

Figure 3-30 Add OSDs

Edit a Network Signal Source

Go to **Video Wall Operation**, hover over a network signal source and then click to edit its parameters.

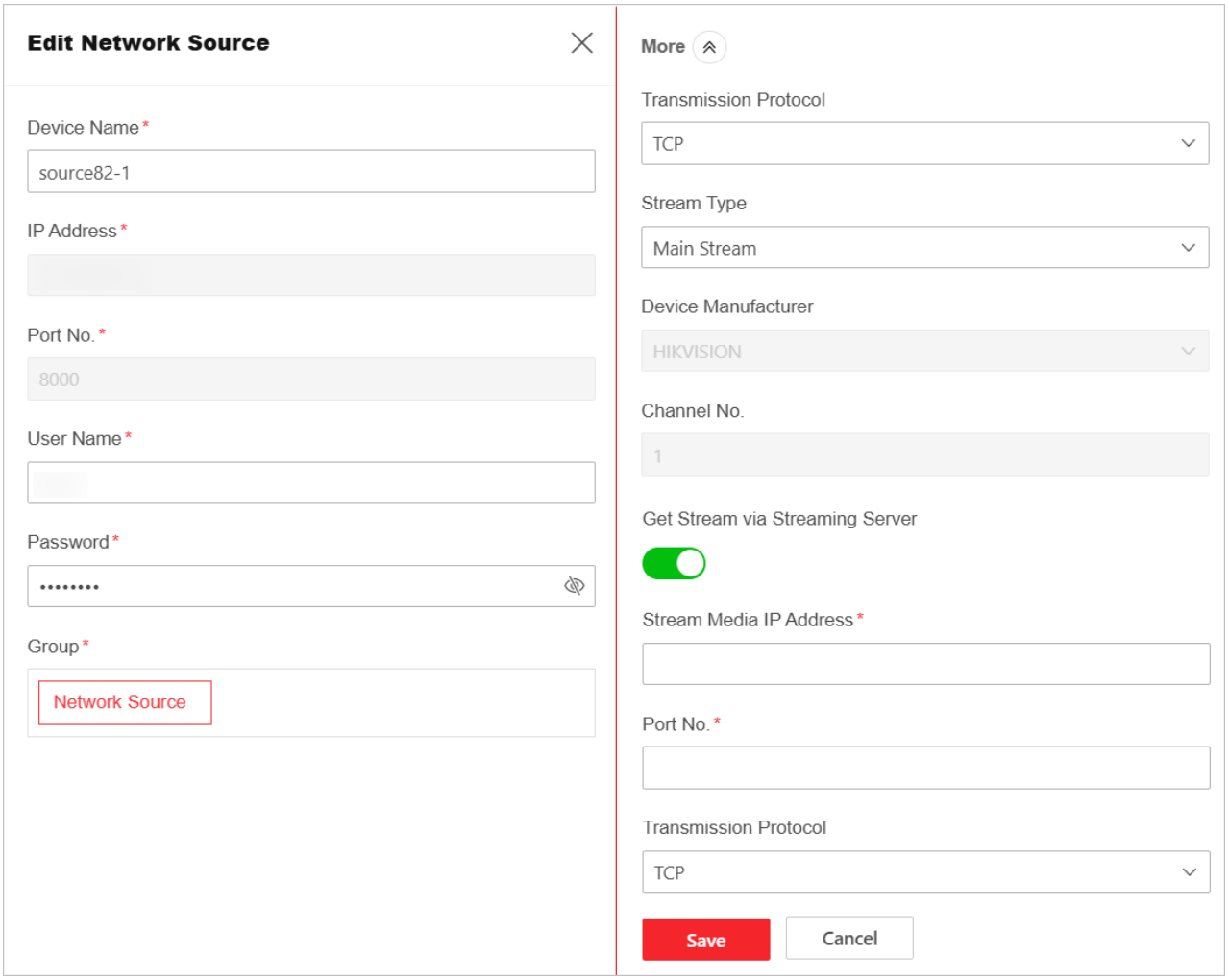

Figure 3-31 Edit a Network Signal Source

3.2.3 Splice Signal Source

This function allows you to splice multiple signal source images into one signal source image. After the signal source splicing, the spliced signal sources will disappear from the signal source list.

Note

- Only UHD signal sources (such as 4K HDMI input channels or 4K DP input channels) support splicing.
- All spliced signal sources should use the same resolution and frame rate to avoid affecting the display effect.
- The joint signal source will be displayed in one signal source window on the video wall.
- When the joint signal source window is floating or zooming on the video wall, the spliced signal source windows also float and zoom on the video wall.

Step 1 Go to **Configuration** → **Signal Source Splicing**, click +.

Step 2 Customize the joint signal source name and splicing scale.

Step 3 Drag the signal source in the signal source list to the splicing window.

Note

The signal sources that are dragged to the splicing window will be spliced to one-way signal source.

Step 4 (Optional) Click **Cancel All Linkage** to cancel the previous signal source splicing and splice the signal sources again.

Step 5 Click **Save**.

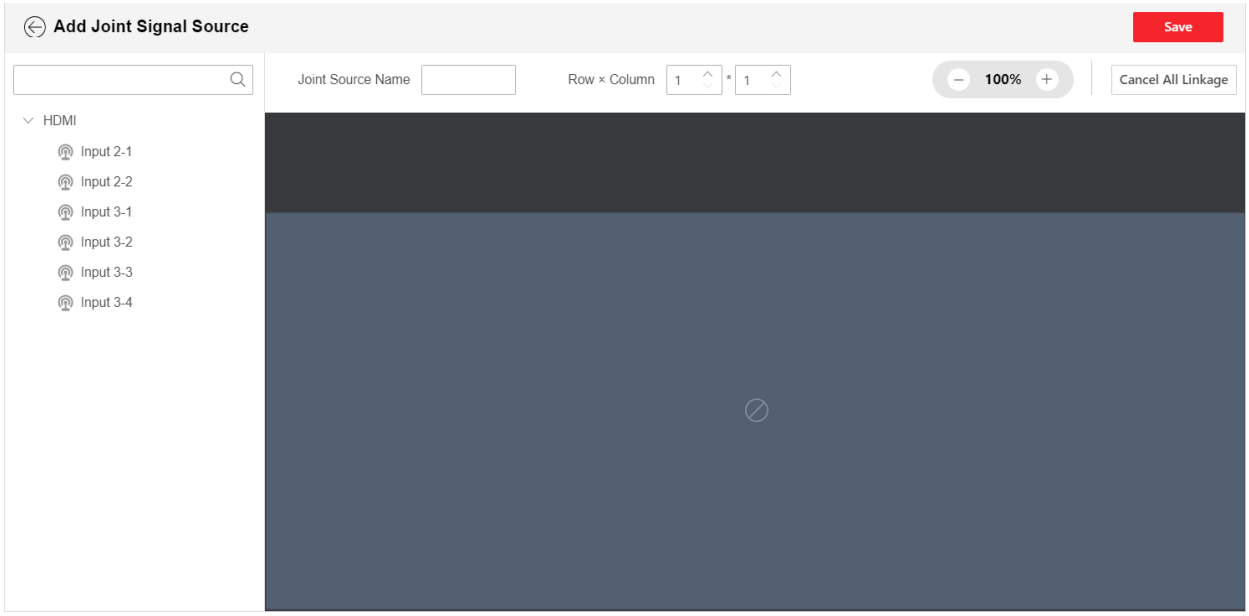

Figure 3-32 Add a Joint Signal Source

3.2.4 Configure Subtitles

Step 1 Go to **Video Wall Operation**, click **Subtitle**, press and hold the left mouse button to drag subtitles to the video wall.

To add multiple subtitles, you can drag the remaining subtitles.

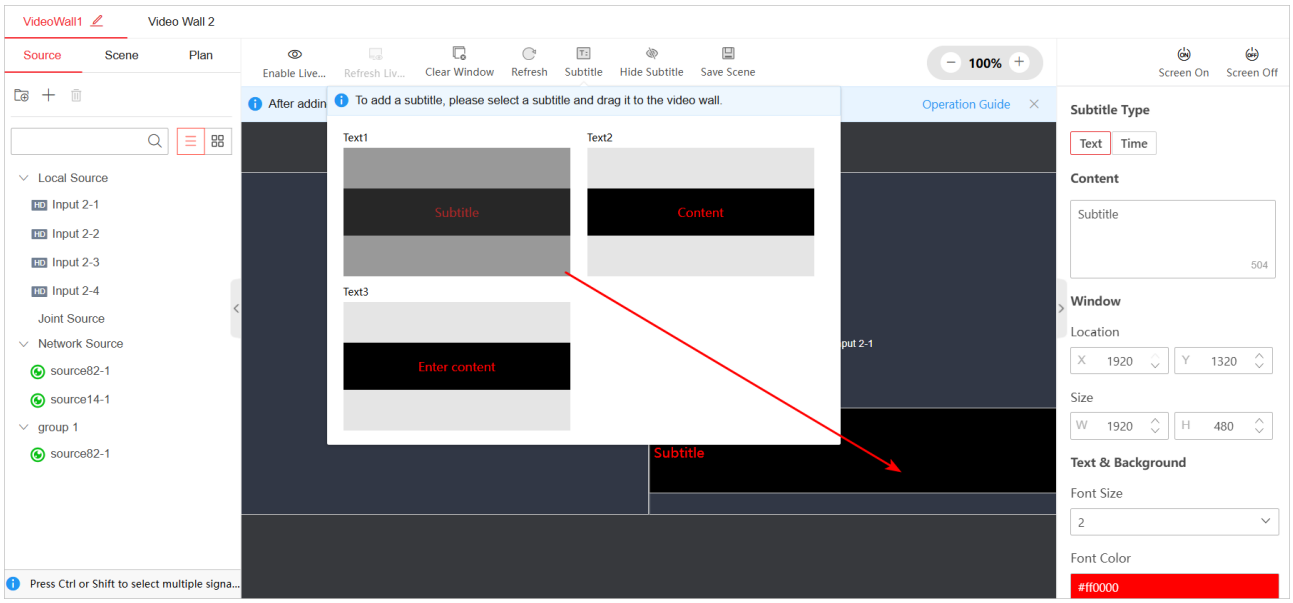

Figure 3-33 Add a Subtitle

Step 2 Edit a text subtitle:

1) Select **Text** for the subtitle type.
2) Enter the subtitle content, adjust the subtitle position and size, and set the text and background.
3) (Optional) Enable **Move** to set the movement speed.

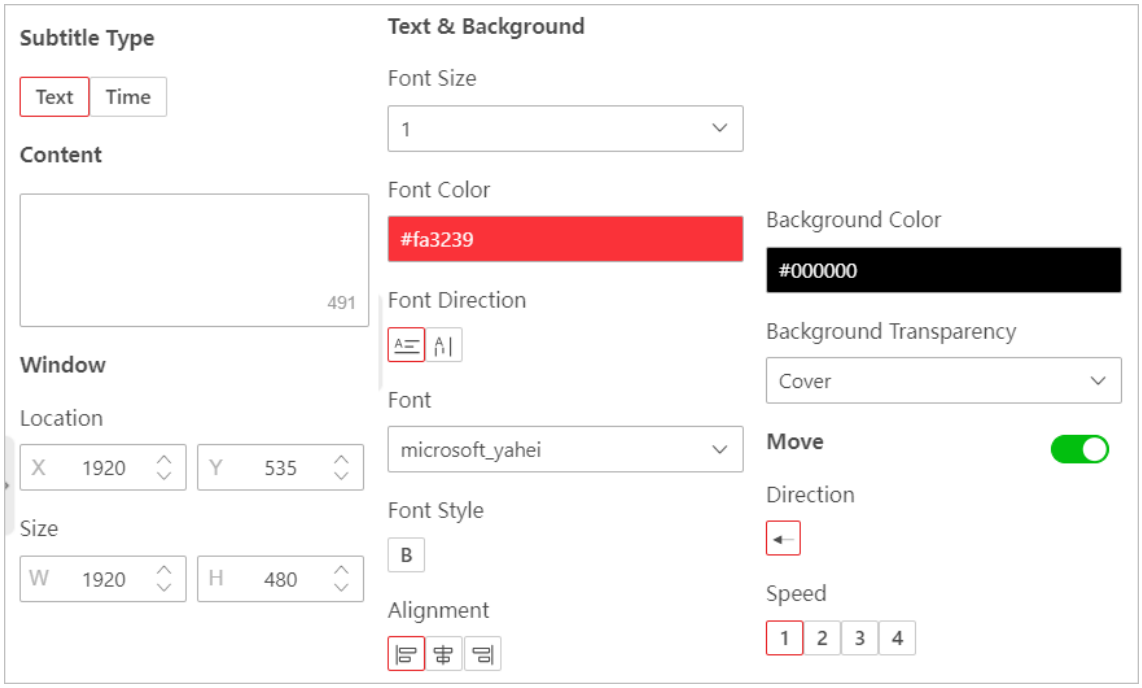

Figure 3-34 Add a Text Subtitle

Step 3 Edit a time subtitle:

1) Select **Time** as the subtitle type.
2) Adjust the subtitle position and size, adjust the time format, and set the text and background.

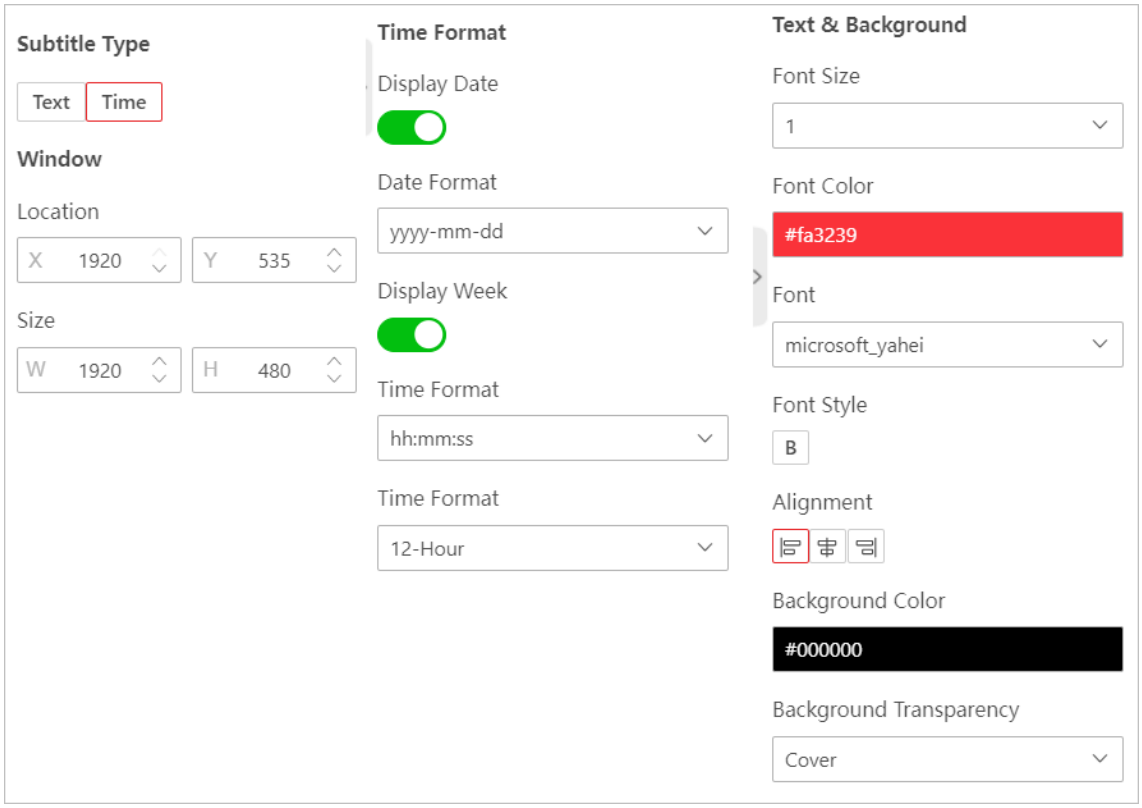

Figure 3-35 Add a Time Subtitle

Step 4 (Optional) You can click **Hide Subtitle** as required.

3.2.5 Manage Scenes

Up to 128 scenes are supported. Go to **Video Wall Operation** to manage scenes.

- Click **Save Scene** to save the current video wall configuration as a new scene or overwrite the existing scene.

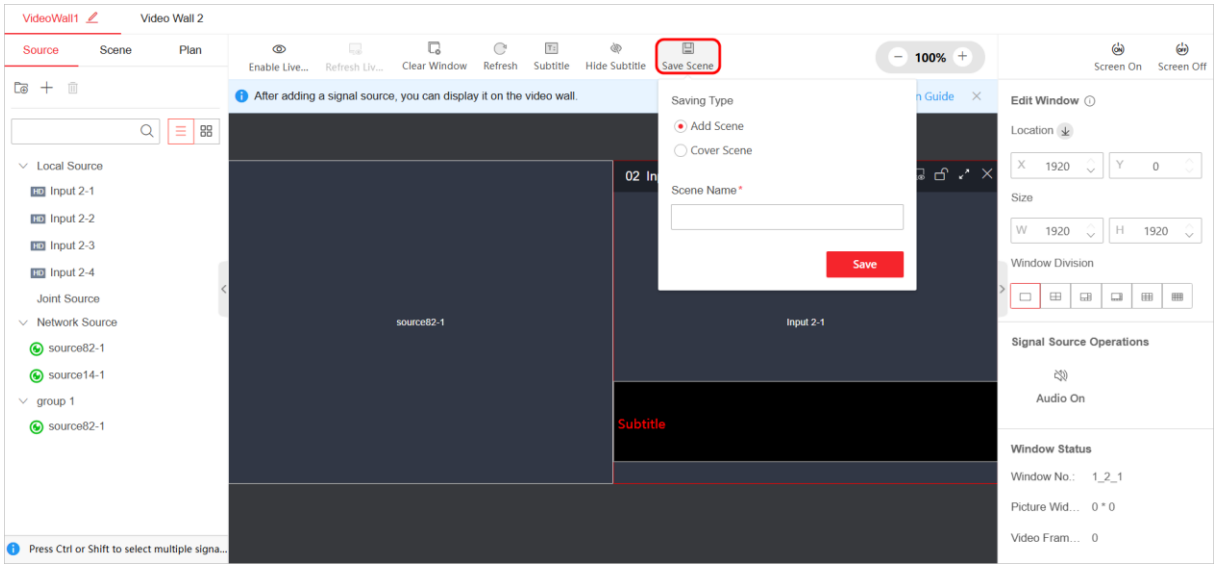

Figure 3-36 Save Scene

- Click **Scene** and hover over a scene name. Click the following icons as required:
  - Click to call the scene.
  - Click to edit the scene name.
  - Click to delete the scene.

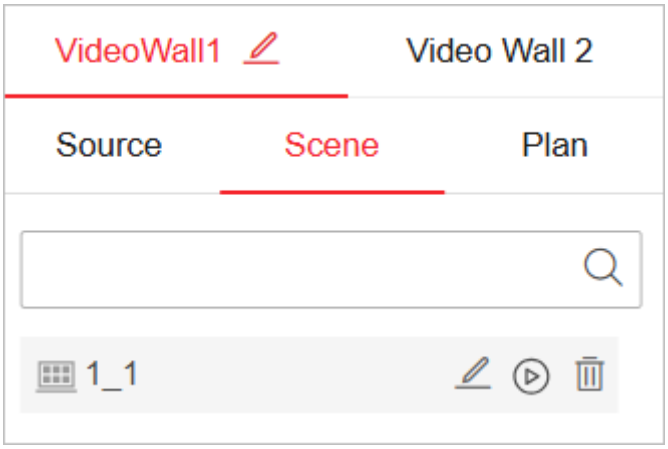

Figure 3-37 Manage Scene

3.2.6 Manage Plans

You can add multiple scenes and set the scene schedule in a plan. Go to **Video Wall Operation** and click **Plan** to manage plans.

- Click to add a plan:
  1) Set the plan name.
  2) Add tasks.
  3) (Optional) Enable **Execute Plan Automatically** and set the schedule.
  4) Click **Save**.

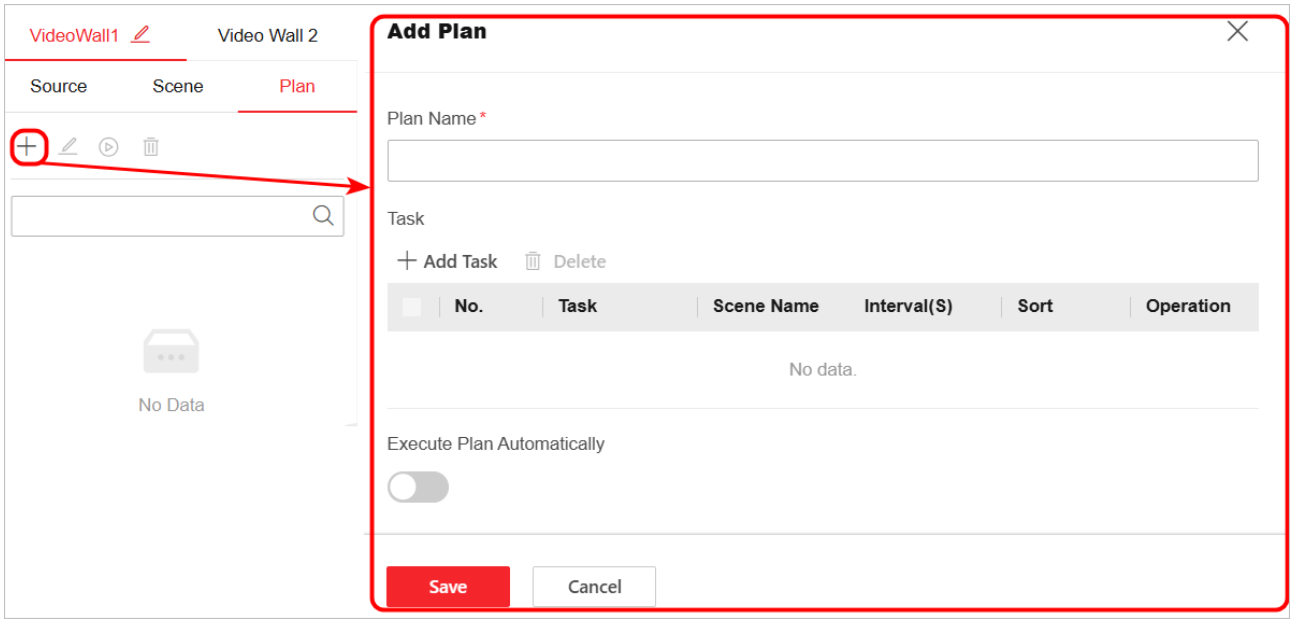

Figure 3-38 Add a Plan

- Click a plan and then click to edit the plan.
- Click a plan and then click to call the plan.
- Click a plan and then click to delete the plan.

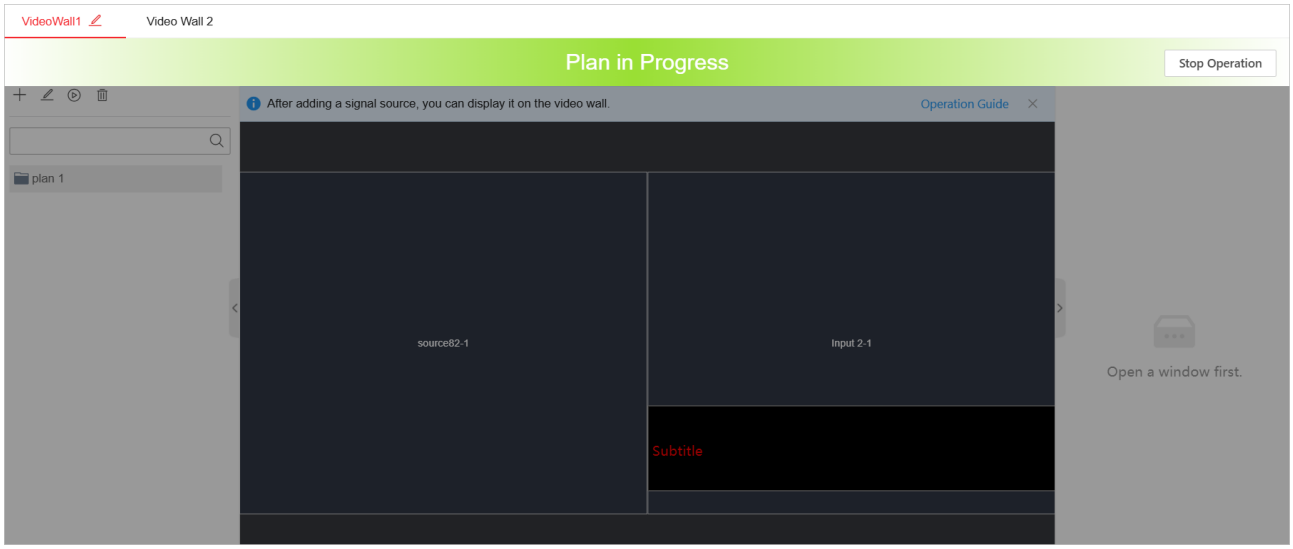

Figure 3-39 Call a Plan

Chapter 4 Other Parameters

4.1 Configure System Parameters

Go to **Configuration** → **System** to configure the following parameters:

- Go to **System Settings** → **Basic Information** to view the device information and edit the device name as required. You can click **Upgrade** to go to the **Upgrade** page.

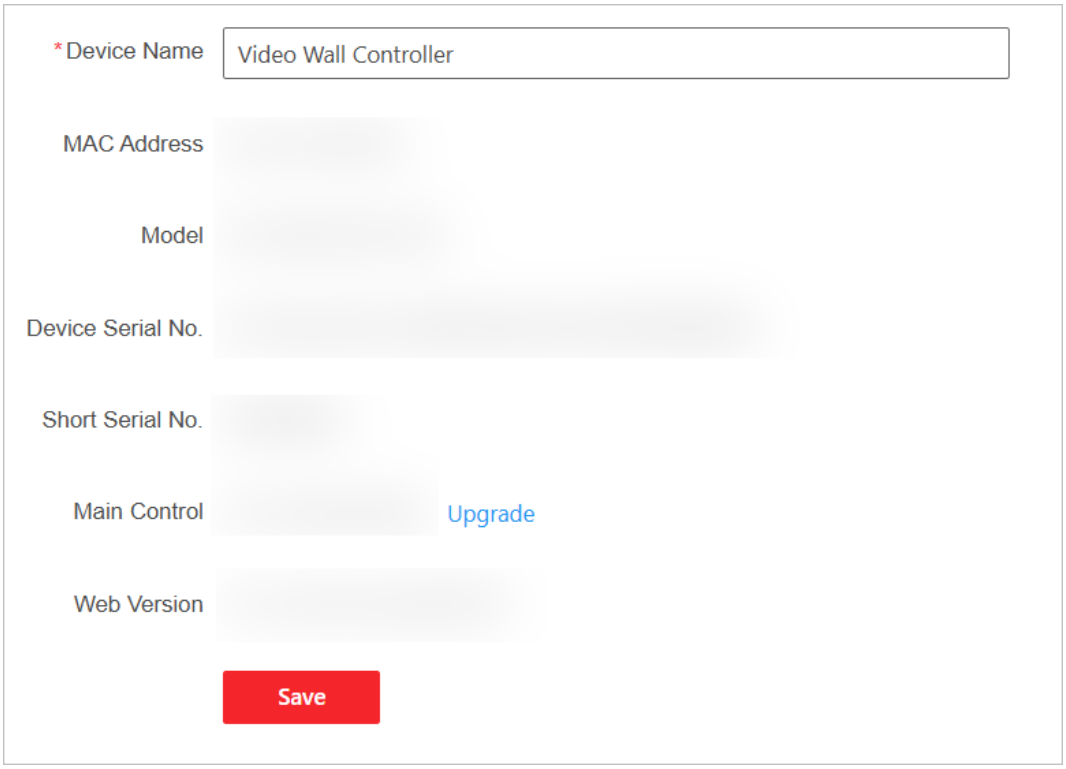

Figure 4-1 View Basic Information

- Go to **System Settings** → **Time Settings**, and set the time sync mode and DST.
  - If you select **NTP Sync**, enter the NTP server address, NTP port number, and interval.

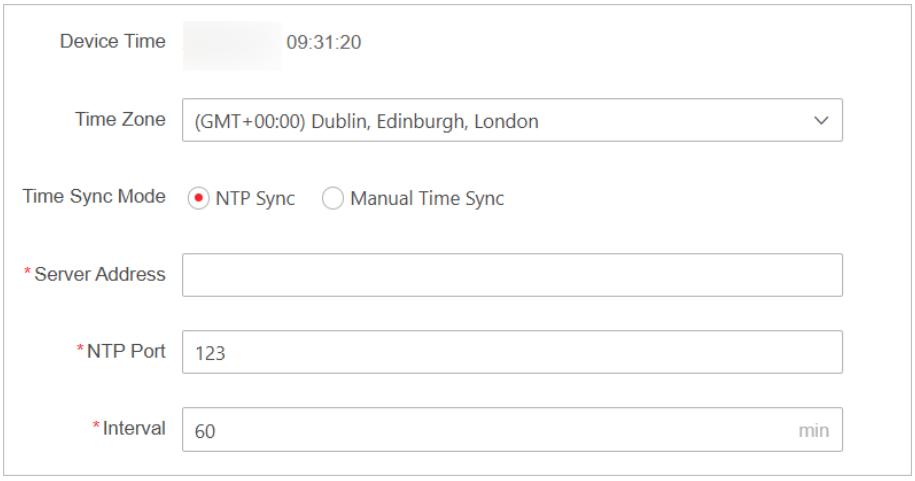

Figure 4-2 Select NTP Sync

- If you select **Manual Time Sync**, you can enter the time or click **Sync with Computer**.

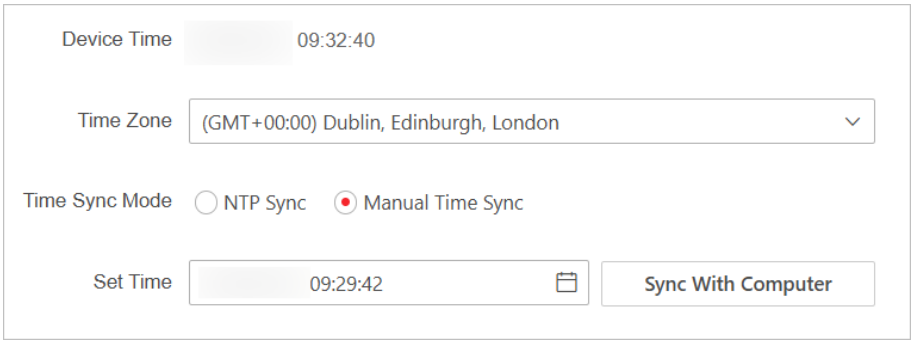

Figure 4-3 Select Manual Time Sync

- If you enable DST (Daylight Saving Time), enter the start time, end time, and bias time.

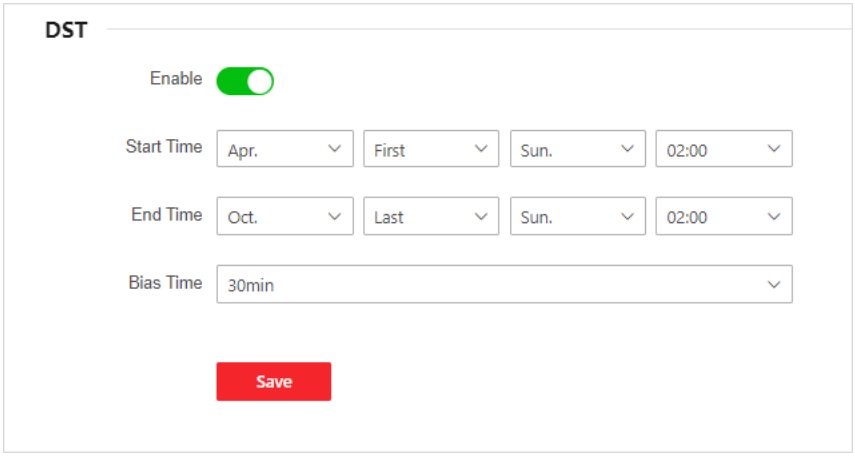

Figure 4-4 Enable DST

- Go to **System Settings** → **Font Settings** to set the font of OSDs and subtitles.
  - Use the default font.
  - Click **Add** to import a new font and enable the new font.

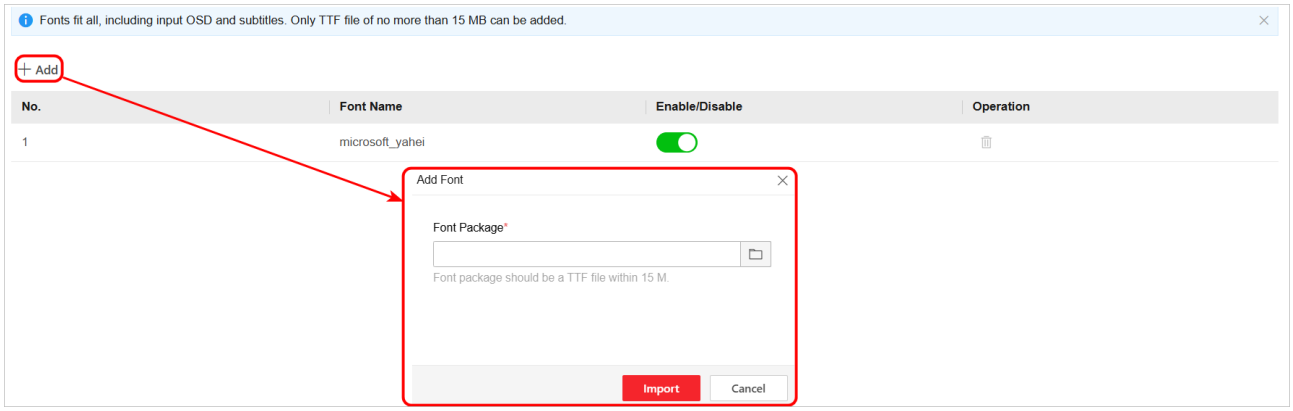

Figure 4-5 Set Font

- Go to **User Management** → **User Management** to add, edit, or delete the users.

  You can only edit the password of the admin user and you cannot edit its user name or delete it.

  - To add a new user, click **Add**, and enter user name, admin password, password, and confirm password.
  - To edit the name or password of a user, click of the user.
  - To delete a user, click of a user, click **OK**, and enter the password of the admin user.

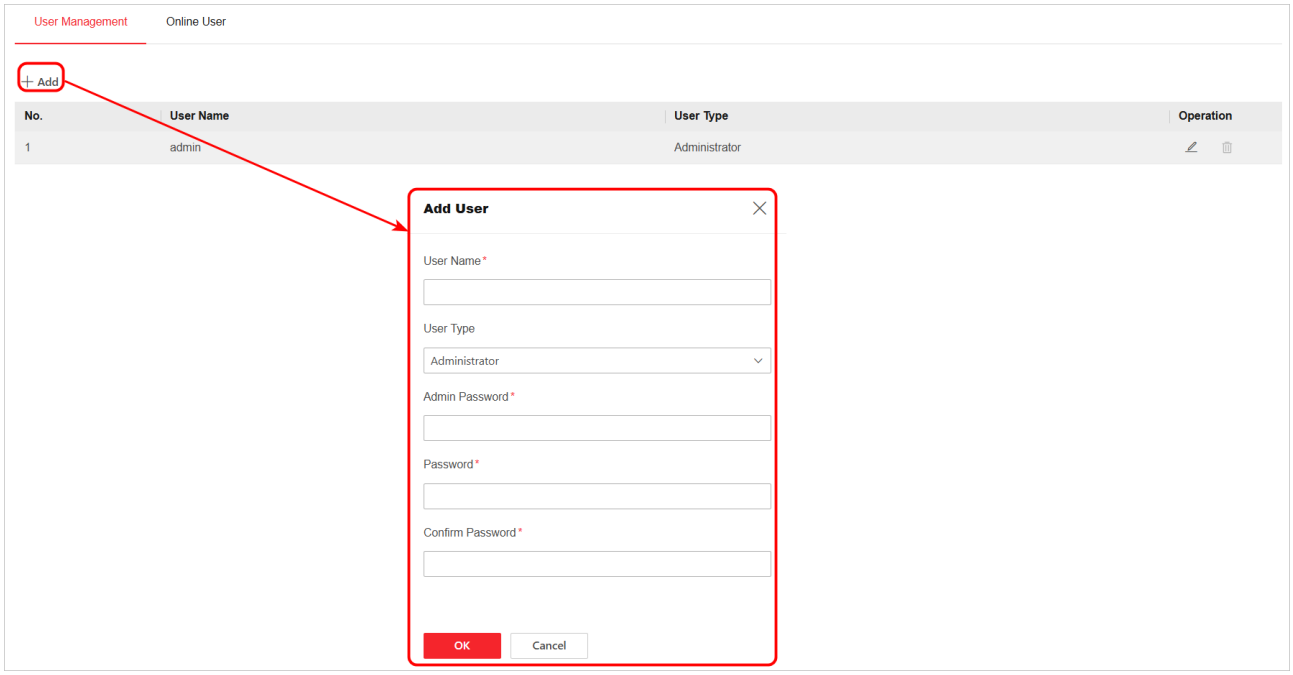

Figure 4-6 Manage Users

- Go to **User Management** → **Online User** to view the information of online users. To refresh the information, click **Refresh**.

Figure 4-7 View Online Users

4.2 Configure HTTP(S) Parameters

Step 1 Go to **Configuration** → **Network** → **Network Service** → **HTTP(S)**.

Step 2 Set the HTTP port number.

The port number can be either 80 or any value from 2000 to 65535. After editing the HTTP port, you need to enter HTTP://Device IP Address: Port in the browser to access the device.

Step 3 Enable HTTPS and then set the HTTPS port.

The default port number is 443. After editing the HTTPS port, you need to enter HTTPS://Device IP Address: Port in the browser to access the device.

Step 4 (Optional) You can perform the following operations as required:

- Enable auto HTTPS redirection to access the device via HTTPS by default.
- Select a digest algorithm type.

Note

Only the admin user can select a digest algorithm type.

Step 5 Click **Save**.

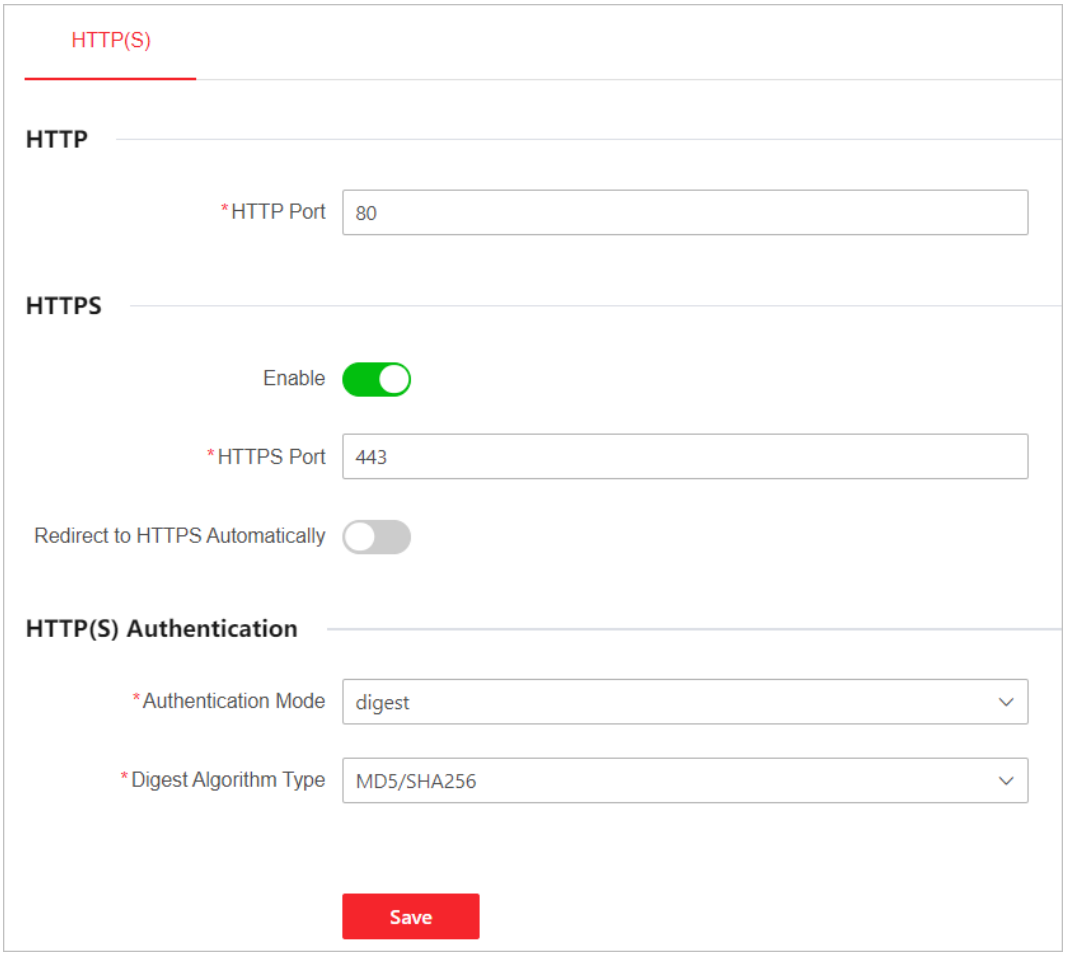

Figure 4-8 Configure HTTP (S) Parameters

4.3 Configure Events

Go to **Configuration** → **Event** to configure the audible warning and alarm reporting to the platform when the following exceptional events occur:

- The IP address of the device is the same as that of other devices in the network.
- Incorrect user name or password.
- Network is disconnected.
- The device temperature is too high or too low.
- The fan status is abnormal.

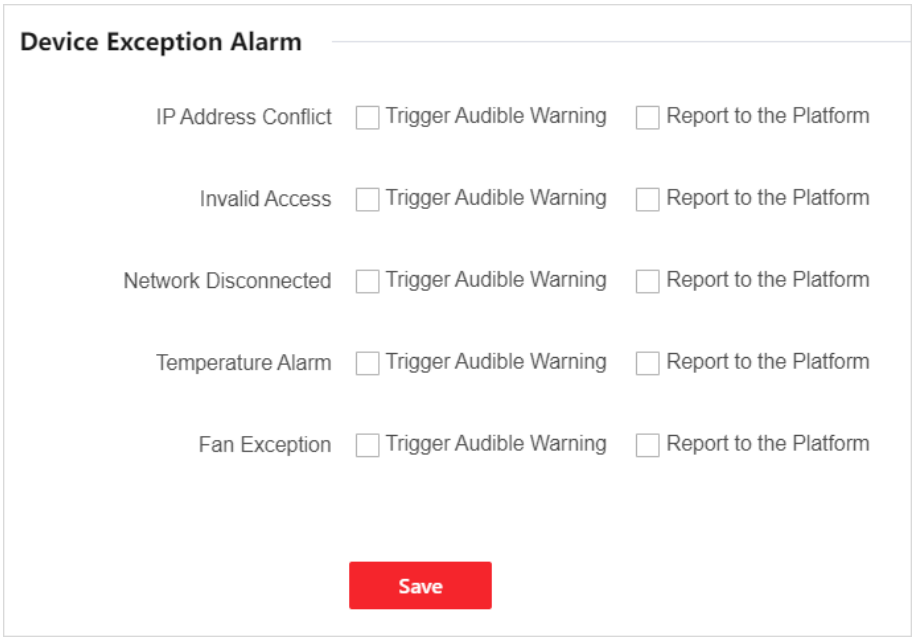

Figure 4-9 Set Device Exception Alarm

4.4 Set Other Parameters of Device

Go to **Configuration** → **Other Settings** to set the following parameters:

- Enable **Sub-Stream Auto-Switch** and set the window division threshold.

  If the window division reaches the window division threshold, the device will automatically use sub-stream to get the images. In low bandwidth networks, you can use sub-stream to get relatively smooth images with a small bandwidth footprint.

Figure 4-10 Set Sub-Stream Auto-Switch

- Click **Display Settings** to enable special resolution or configure the content displayed when streaming fails.
  - To set an LED video wall that uses varied height of the same row or varied width of the same column, enable the special resolution and set the special resolution on the **Video Wall Configuration** page.
  - If you select **Connection Exception**, the specific streaming failure reason will be shown on the screen.

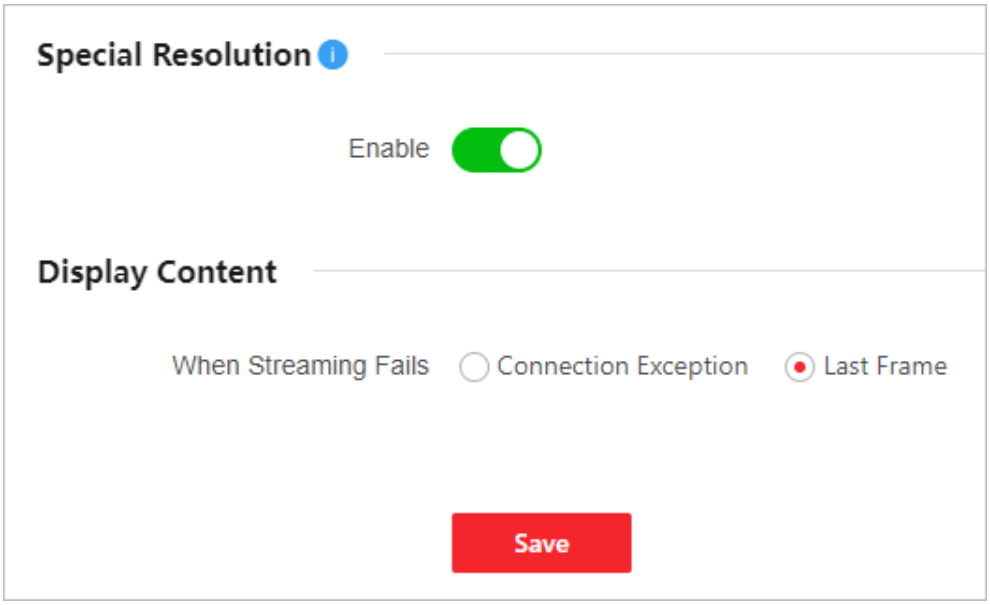

Figure 4-11 Set Display Content

- Click **Scene Change** to enable **Change Subtitle as Scene Changes**.
- Click **Decoding Delay** and select a default decoding delay level.
- When the preview board is in the device, you can display the image of a video wall on the connected screen(s). Click **Display a Video Wall Image on Screen**, select a video wall and then enable this function.

Note

When a video wall is bound to an LED controller board, displaying a video wall image on screen is not supported.

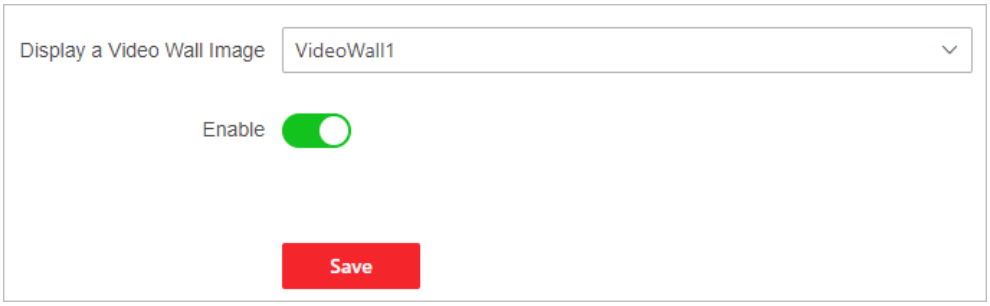

Figure 4-12 Display a Video Wall Image on Screen

- Click **Sub-board Mode Settings** to configure sub-board mode:

  When the DS-D60S-02HO/4K sub-board is inserted into the device, you can configure the sub-board mode.

  - If you select **Copy Mode**, the output port 2 will copy the image of the output port 1, only the output port 1 can be bound with the video wall, and the maximum resolution is 4K 60 fps.

- If you select **Independent Mode**, the output port 1 and output port 2 can be bound with the video wall and the maximum resolution of each port is 4K 30 fps.

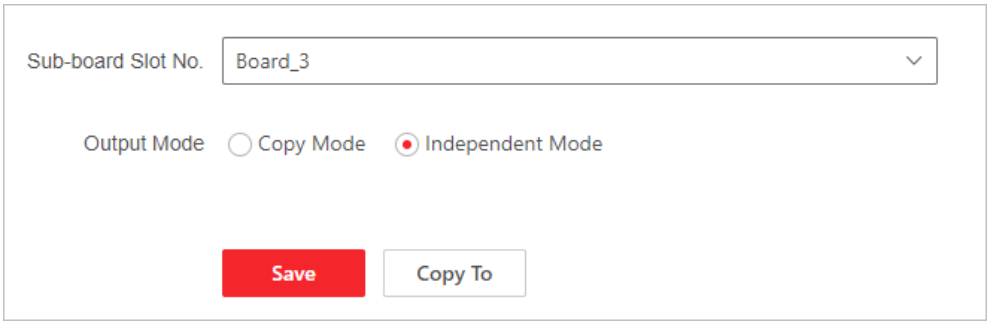

Figure 4-13 Configure Sub-board Mode

- Click **No Signal Image** to use the default image or upload a new image.

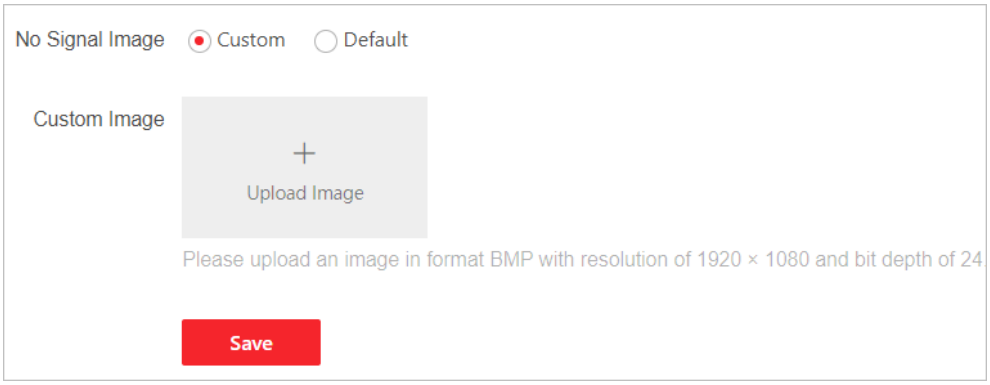

Figure 4-14 Configure No Signal Image

Chapter 5 Device Maintenance

5.1 View Device Status

Go to **Overview** to view the device status. You can click a board to view its basic information and its usage.

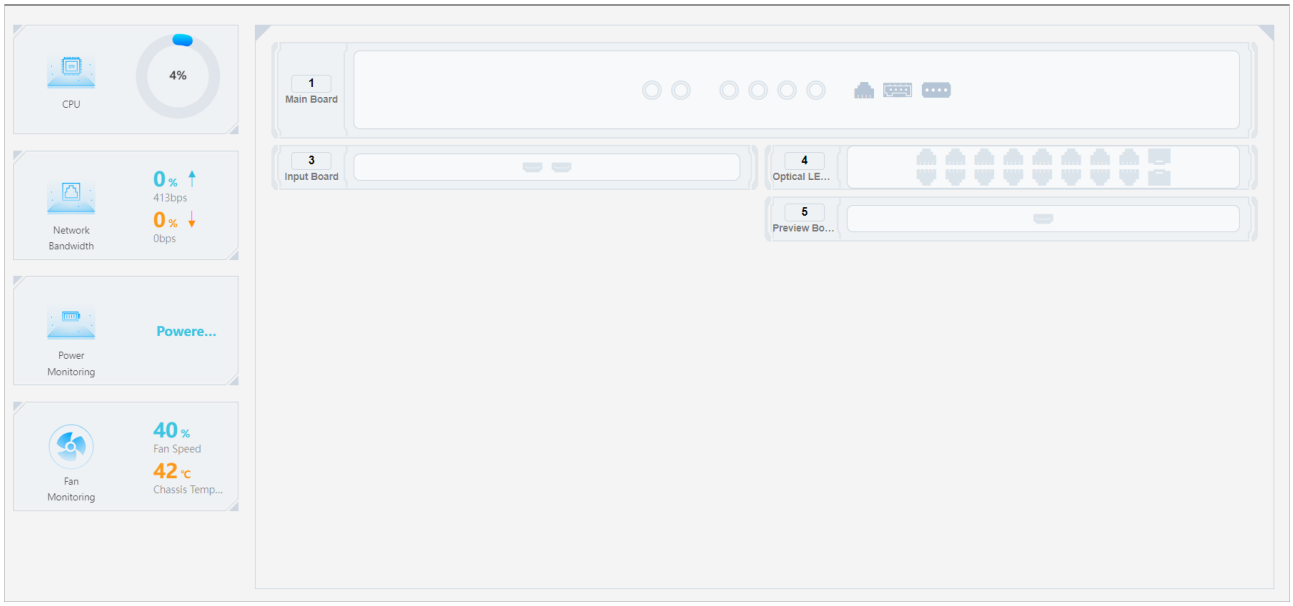

Figure 5-1 View Device Status

5.2 View Status of LED Controller Board

Go to **Screen Maintenance** → **Specific Video Wall** → **Receiving Card Status**, select the output port of an LED controller board, and view the following information:

- This page visually shows the basic information of the selected LED controller board and its network interface usage.
- A blue screen indicates that its receiving cards are online. You can hover over a screen to view the resolution of receiving cards.
- Hover over a network interface to view the network interface usage.
- Click **Receiving Card Status** to view the detailed information of the receiving cards. For HUB receiving cards, you can click to view its signal port connection.
- Click **Refresh** to obtain the latest status of the LED controller board.

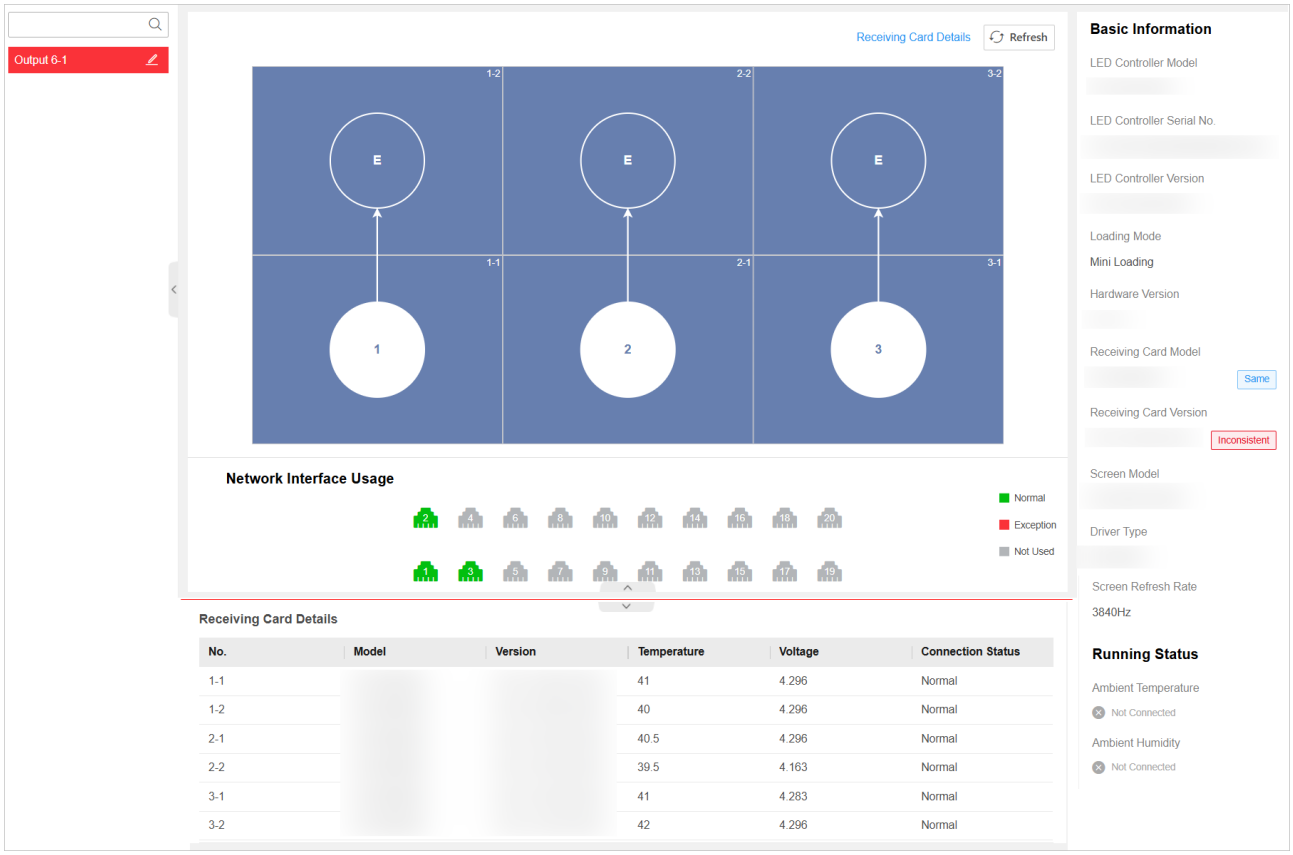

Figure 5-2 View Receiving Card Status

- After lightening the screens via the LED Tool client, you will see a prompt to reconfigure the display lightening parameters on the **Receiving Card Status** page when you log in to the device web page. Please reconfigure the screen lightening parameters on the web page.

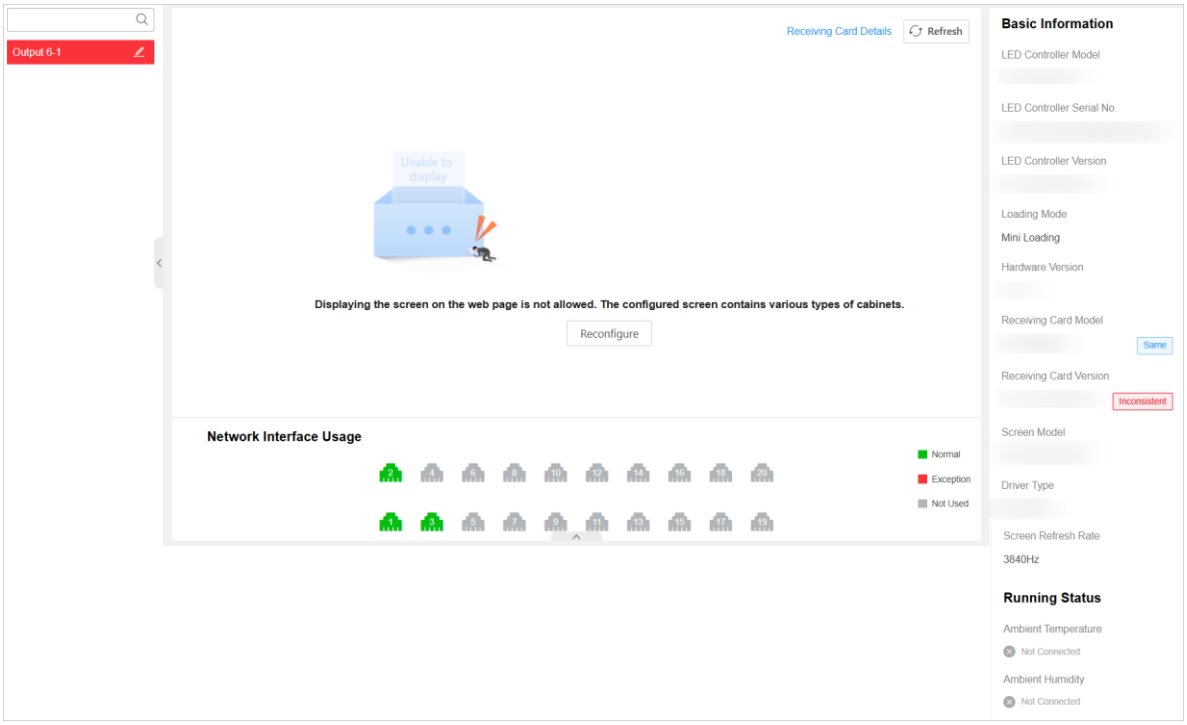

Figure 5-3 Reconfiguration Prompt on Overview Page

5.3 Test Condition of Directly Connected LED Screens

Step 1 Go to **Screen Maintenance** → **Specific Video Wall** → **Screen Test**.

Step 2 Enable the screen test.

Step 3 Select an image to check whether the screen color is normal or whether the dead pixels exist.

- Select an existing color, or add a new color and select the new color. You can edit the newly added color as required.
- Select a gray scale.
- Select a line.

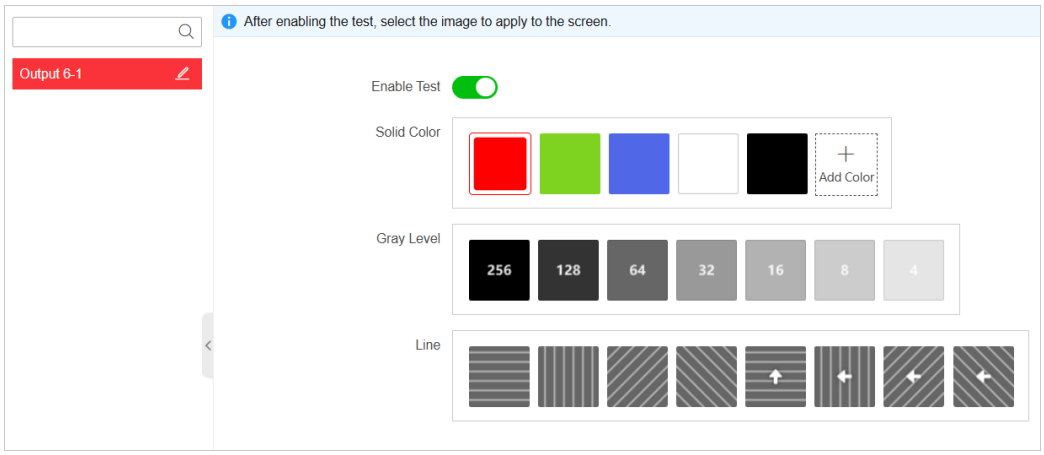

Figure 5-4 Test Screen Condition

5.4 Quickly Maintain a Receiving Card

If the display is installed with a new receiving card, you can use this function to copy the configuration of the reference receiving card to the new receiving card. Make sure the newly installed receiving card is connected with the LED controller.

Step 1 Go to **Screen Maintenance** → **Specific Video Wall** → **Receiving Card Quick Maintenance**.

Step 2 Select a receiving card and click **Set as Reference Card**. The configuration of the reference receiving card can be copied to the new receiving card.

Step 3 Select a receiving card and click **Set as New Card**.

Step 4 Click **Copy** to copy the configuration file of the reference card to the new card.

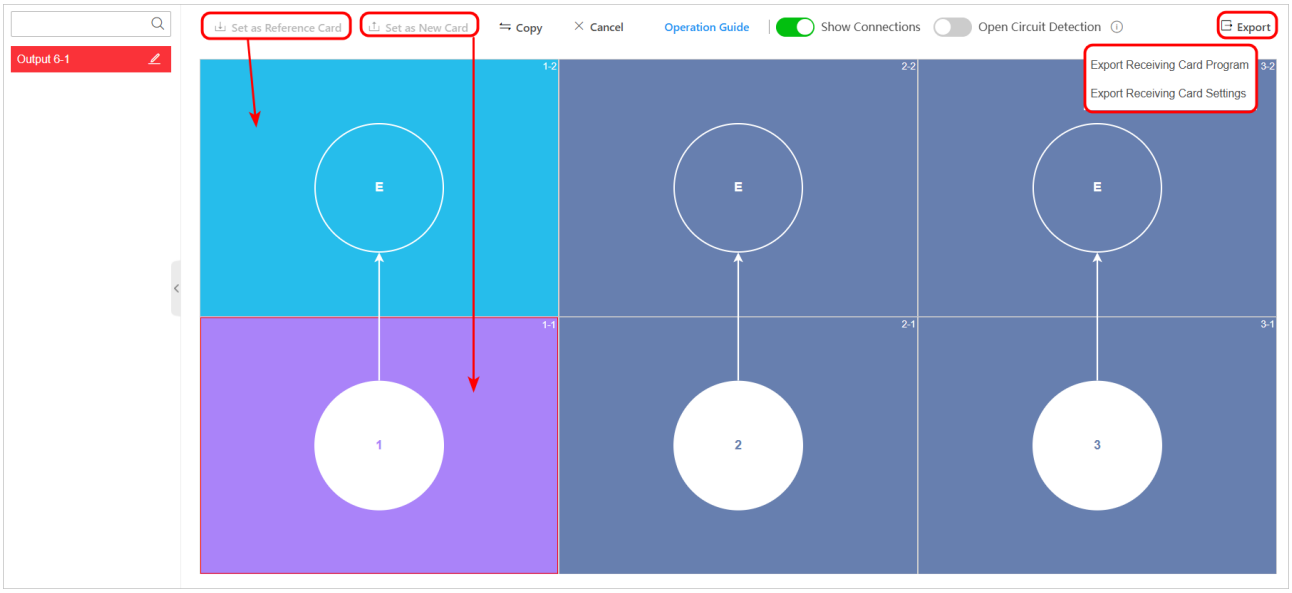

Figure 5-5 Quickly Maintain Receiving Cards

Step 5 (Optional) You can perform the following operations as required:

- Click **Export** to export the receiving card program file or receiving card configuration file.
- Click **Show Connections** to view the signal connection of the LED controller.
- Enable **Open Circuit Detection** to repair the cross phenomenon caused by damaged lamp beads. Before repairing the damaged lamp beads, disable open circuit detection.
- Click **Cancel** to cancel the copy operation.

5.5 Maintain Screens

5.5.1 Control Screen via Serial Port

Step 1 Go to **Configuration** → **System** → **Serial Port Settings** → **Main Node Serial Port**, select **Screen Control** as the working mode, set the baud rate of the device same as the baud rate of the screen, and set other serial port parameters.

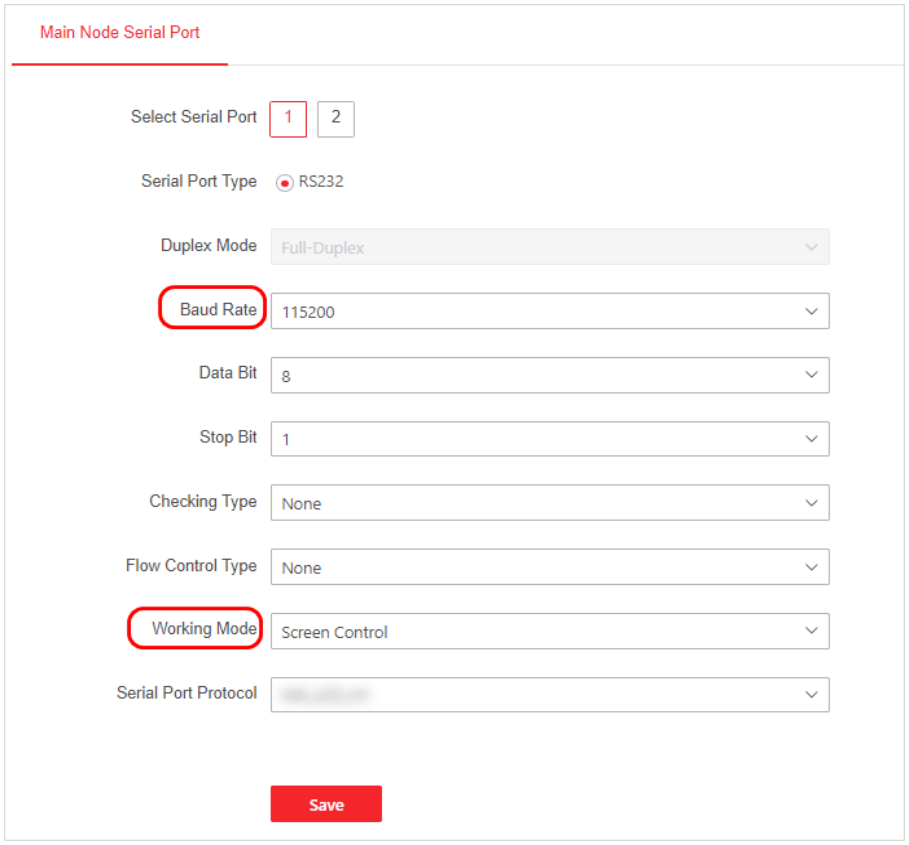

Figure 5-6 Configure Serial Port

Note

- If you select **Keyboard Control** working mode, connect the keyboard to the device and set the baud rate of the device same as the baud rate of the keyboard.
- If you use a serial keyboard, click **Get/Refresh Signal Source** to obtain the local signal sources, and click **Add Signal Source** to add network signal sources. After you change the input board of the device, you need to click **Get/Refresh Signal Source** to refresh the local signal sources.

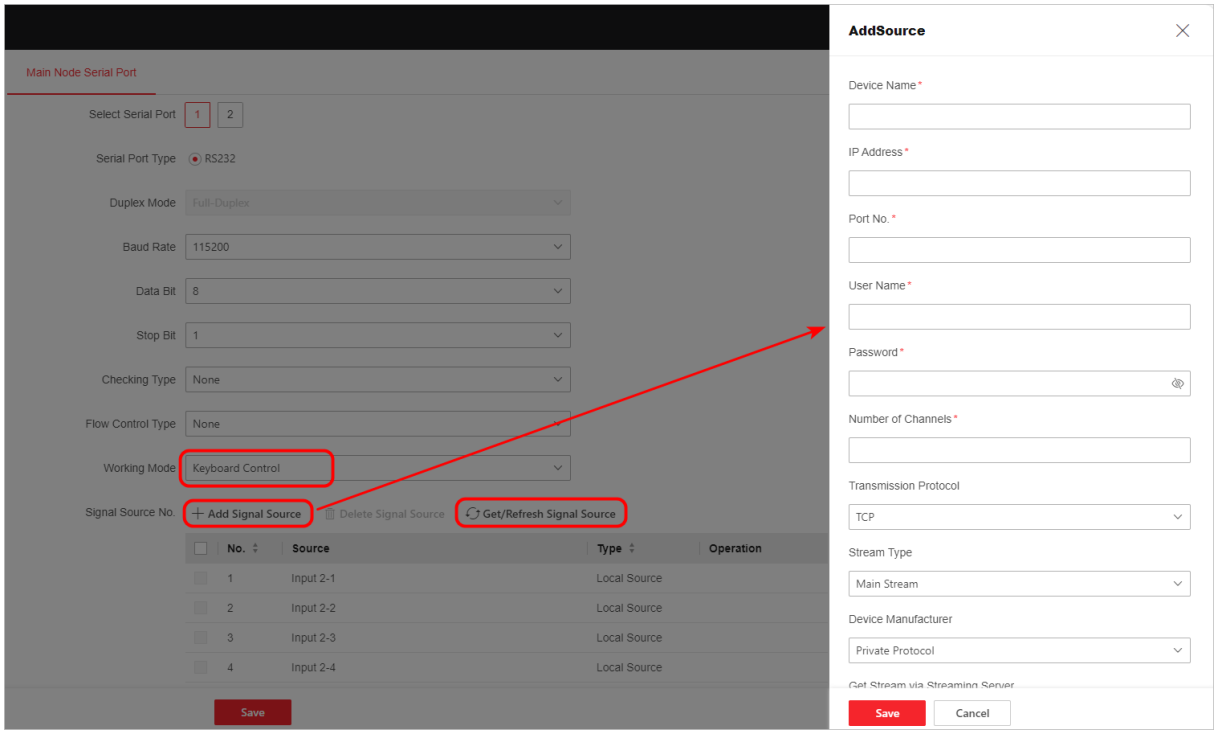

Figure 5-7 Control Serial Keyboard

Step 2 Use a serial port cable to connect a screen and the device RS-485 or RS-232 port.

Step 3 Go to **Screen Maintenance** → **Specific Video Wall** and select the screen that is connected with the serial port cable.

Step 4 Select an input source type.

Step 5 Adjust the image position.

Step 6 (Optional) You can perform the following operations as required:

- Click **Screen On** to power on the connected LCD screen.
- Click **Screen Off** to power off the connected LCD screen.

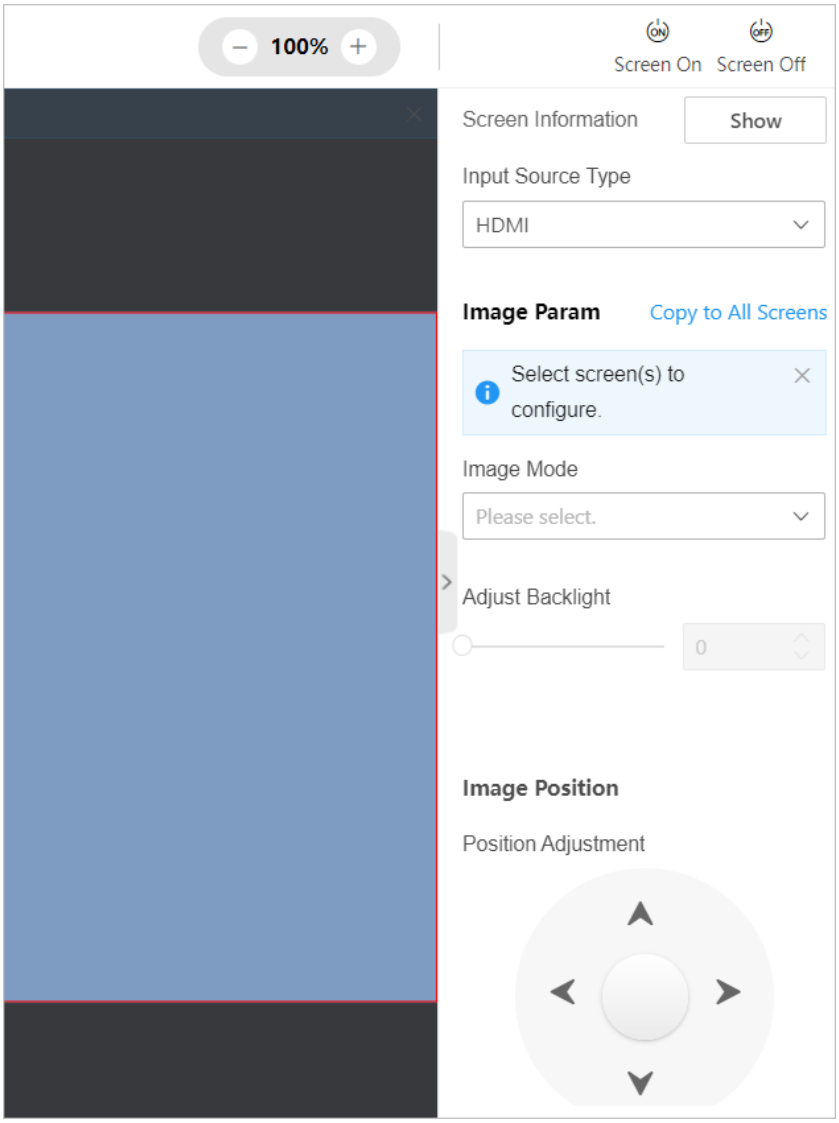

Figure 5-8 Control LCD Screen via Serial Port

5.5.2 Control Screens via HDMI Ports

Step 1 Use multiple HDMI cables to connect the multiple screens to the device. Make sure all connected screens support and are enabled with the control linkage function.

Step 2 Go to **Screen Maintenance** → **Specific Video Wall** and select a screen.

Step 3 Select an image mode and adjust the backlight.

Step 4 (Optional) You can perform the following operations as required:

- Click **Show** to show the software version, work duration and device temperature on all screens.
- Power on the connected screens through the HDMI cables:
  - The LCD screens are powered on after you click **Screen On**.
  - The LED screens exit the sleep mode after you click **Screen On**.

- Power off the connected screens through the HDMI cables:
  - The LCD screens are powered off after you click **Screen Off**.
  - The LED screens enter the sleep mode after you click **Screen Off**.
- Click **Copy to All Screens** to copy the image parameters of the current screen to all screens.

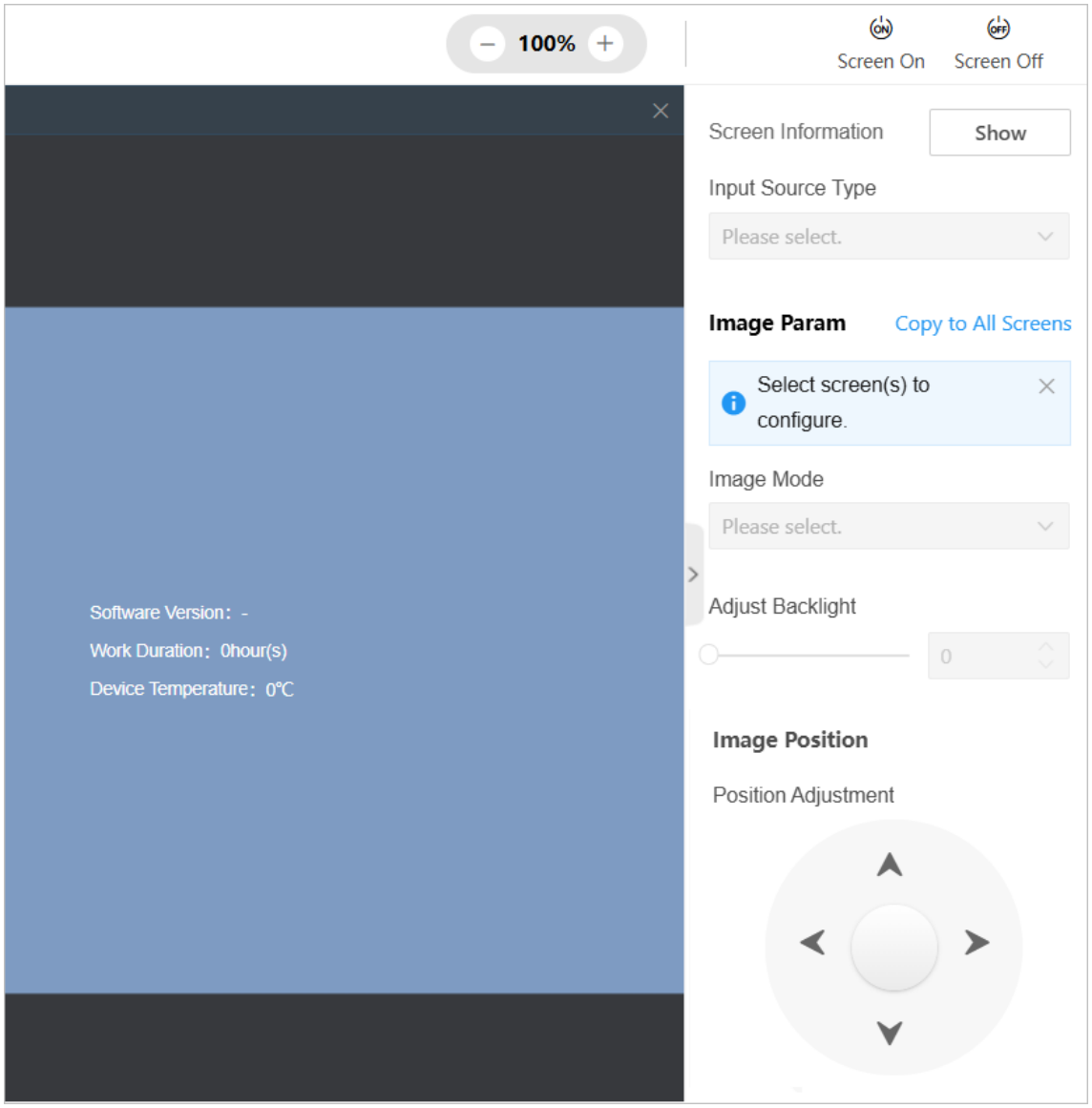

Figure 5-9 Show Screen Information

5.6 Maintain the System

- Go to **Maintenance and Security** → **System Maintenance** → **Restart**, and restart the following devices as required:
  - Click **Restart** to restart the device.

- Select an LED controller board and click **Restart** to restart the receiving cards that are controlled by the selected LED controller board.

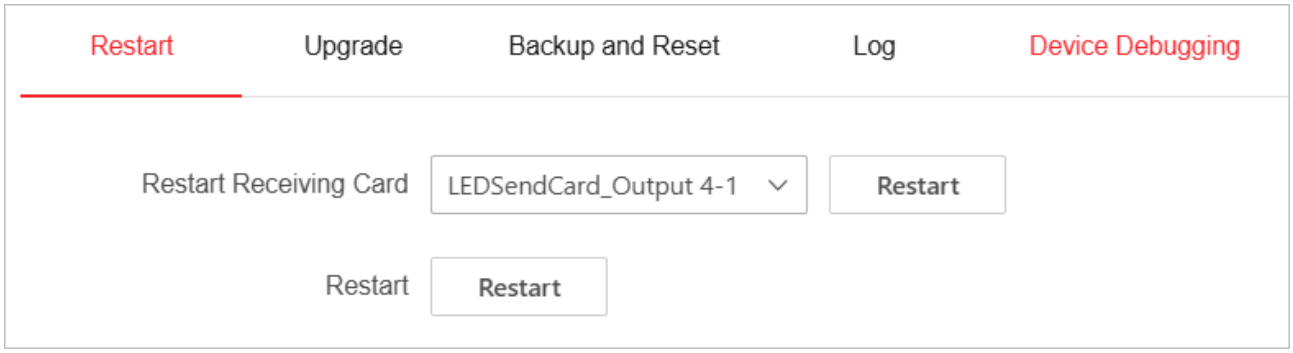

Figure 5-10 Restart Page

- Go to **Maintenance and Security** → **System Maintenance** → **Upgrade**, and upgrade the following devices as required:
  - Upgrade the device: Click to select an upgrade file of the device, and click **Upgrade**.
  - Upgrade all LED controller boards in the device: In the **Upgrade Device** area, click to select an upgrade file of the LED controller board, and click **Upgrade**.
  - Upgrade a receiving card: Select an LED controller board, click to select an upgrade file of the receiving card, and click **Upgrade**.

Note

You need to get the upgrade file in advance and save it locally.

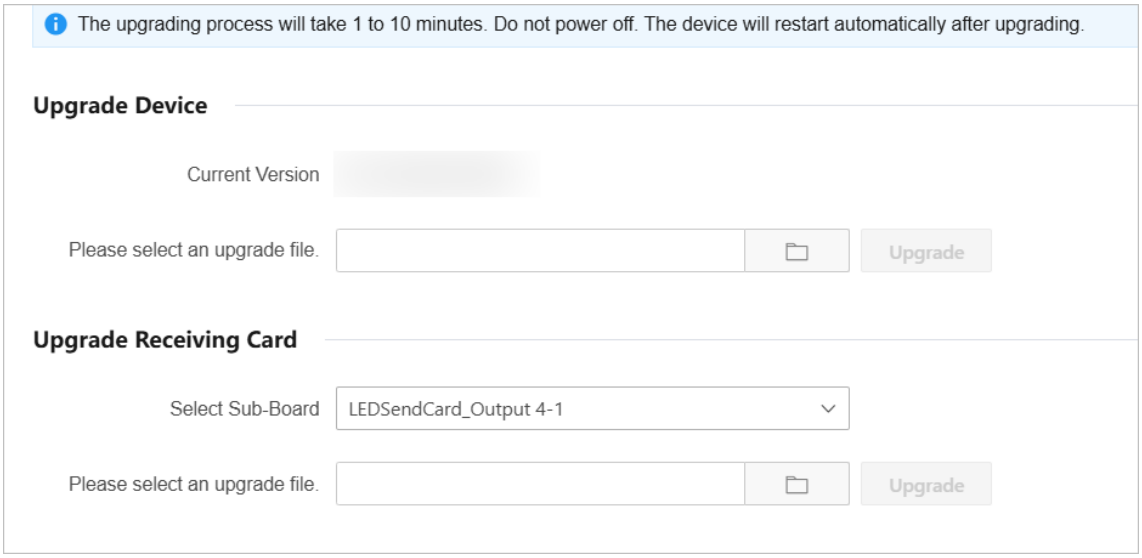

Figure 5-11 Upgrade Page

- Go to **Maintenance and Security** → **System Maintenance** → **Backup and Reset**, and back up the following parameters:
  - Select an LED controller board and click **Export** to export the debug file of the receiving cards that are controlled by the selected LED controller board.

- Select an LED controller board and click **Export** to export the configuration file of the receiving cards that are controlled by the selected LED controller board.
- Select an LED controller board and click **Export** to export the configuration file of the selected LED controller board.
- Click **Export** to export the device parameters.
- Click **Export** to export the scene parameters.

- On the **Backup and Reset** page, import the following parameters:
  - Select an LED controller board, click  to select a configuration file of the LED controller board, and click **Import**.
  - Click  to select a device parameter file, and click **Import**.
  - Click  to select a scene parameter file, and click **Import**.
- On the **Backup and Reset** page, reset the device:
  - Click **Restore Default** to restore the parameters except for user information and network parameters to the default settings. Please use this function with caution.
  - Click **Restore Factory** to restore all functions and parameters of the device to the factory settings. Please use this function with caution.

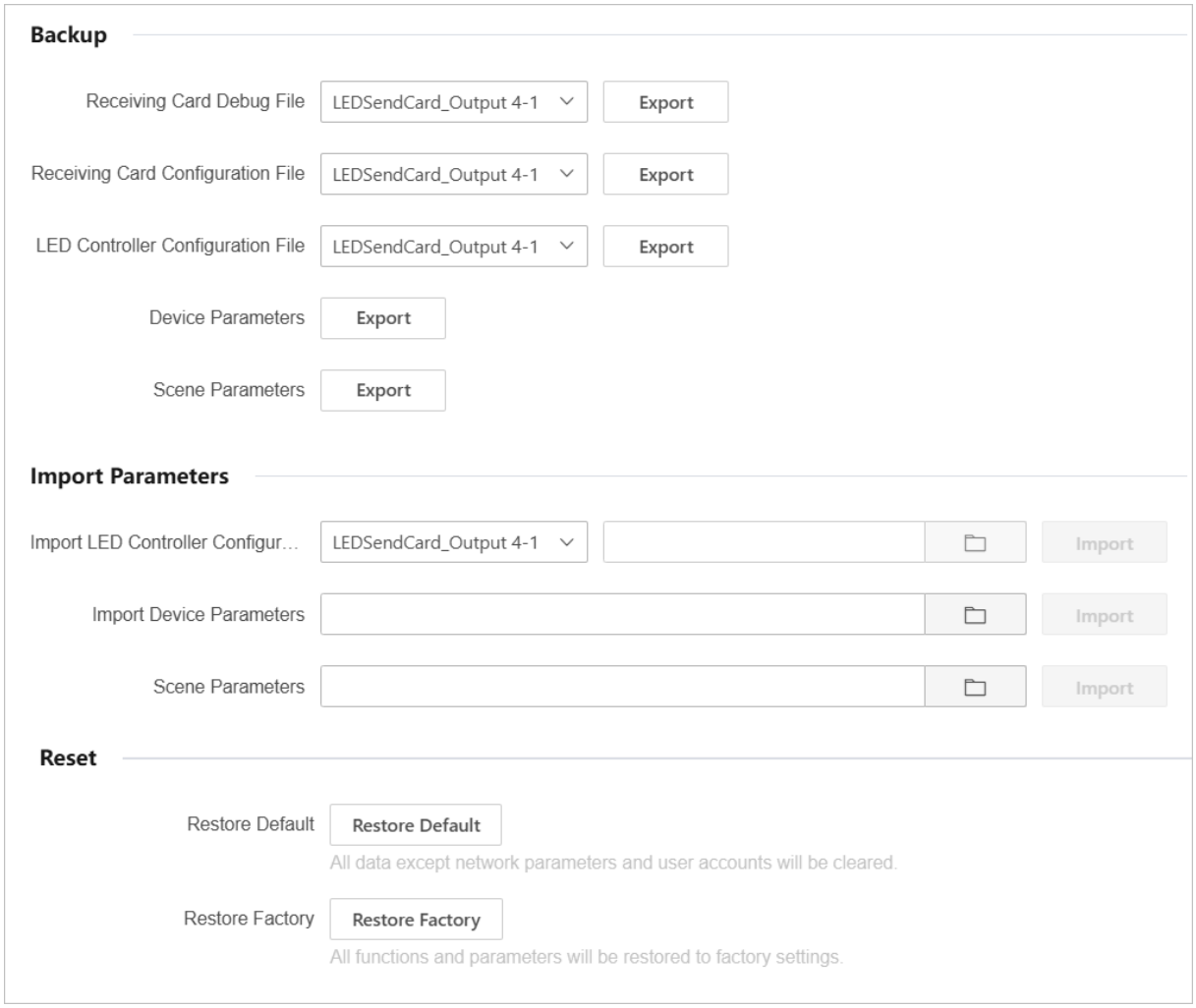

Figure 5-12 Backup and Reset Page

- Go to **Maintenance and Security** → **System Maintenance** → **Log**, set the search condition and click **Search**. You can view the searched logs in the list below and export the logs as required.

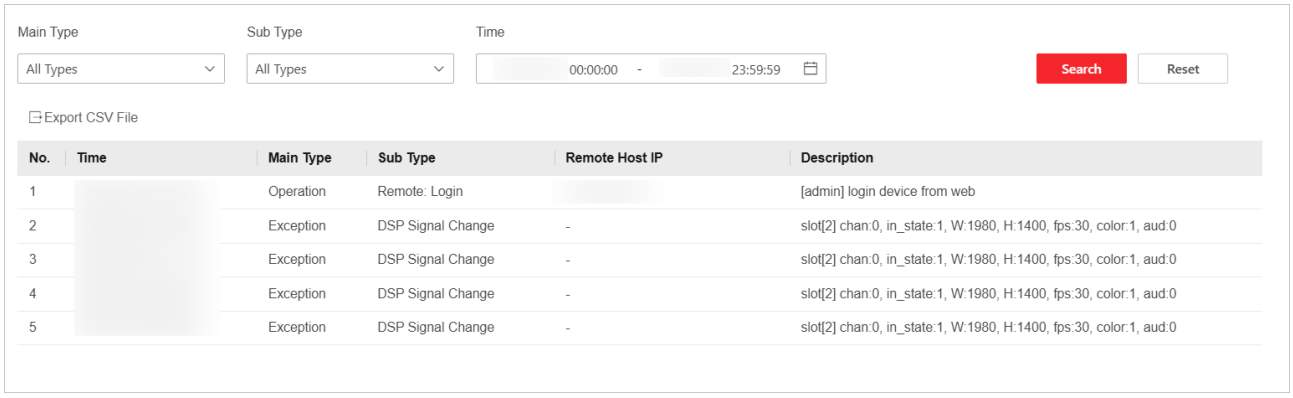

Figure 5-13 Search Logs

- Go to **Maintenance and Security** → **System Maintenance** → **Device Debugging**, and configure the following parameters as required:

- Enable SSH (Secure Shell), enter the port number and click **Save**. With SSH enabled, you can use a computer installed with the SSH client to access the device.
- Click **Export** to export the device information.
- Select a sub-system, click **Start Capturing** and then you can download the obtained packet capture file.
- Send a shell command and then check the response message.

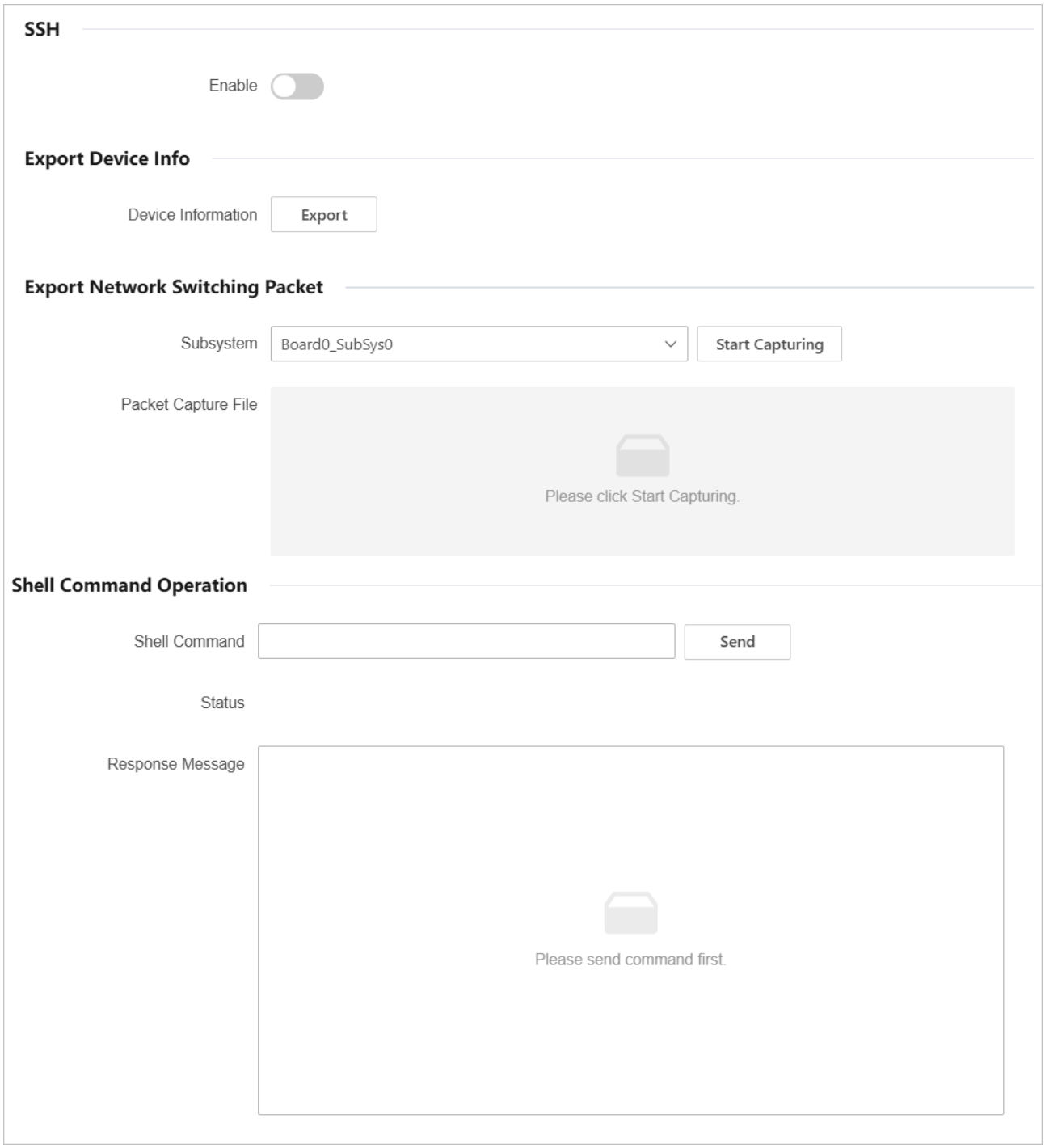

Figure 5-14 Debug the Device

5.7 Maintain the Device Security

Go to **Maintenance and Security** → **Security Management** to configure the following parameters:

- On the **IP Address Filter** page, configure the IP addresses that are allowed to or forbidden to access the device.

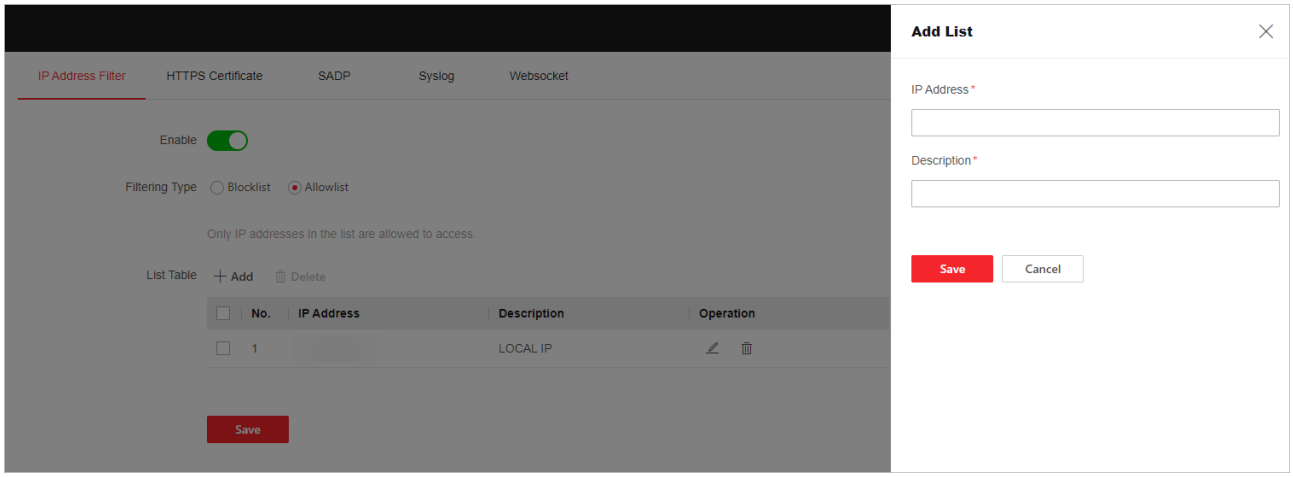

Figure 5-15 Configure IP Address Filter

- On the **HTTPS Certificate** page, import the locally saved HTTPS certificate and secret key.

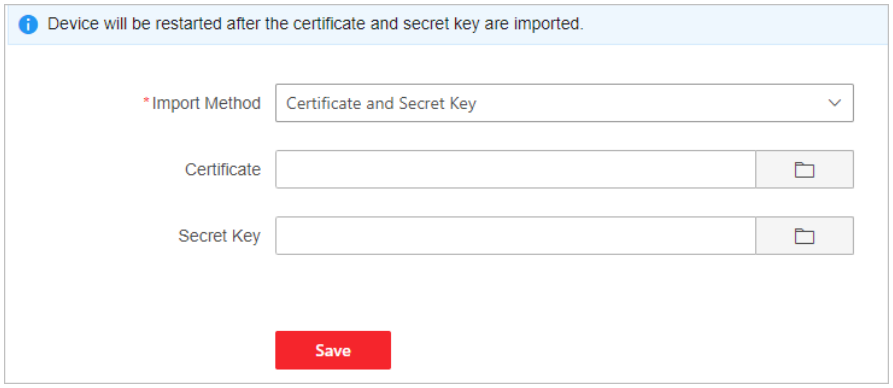

Figure 5-16 Import HTTPS Certificate and Secret Key

- On the **SADP** page, enable SADP as required. With SADP enabled, you can use the SADP software to search the online device that is in the same network segment with the computer.
- On the **Syslog** page, enable Syslog as required. With Syslog enabled, the device logs can be uploaded to the Syslog server.

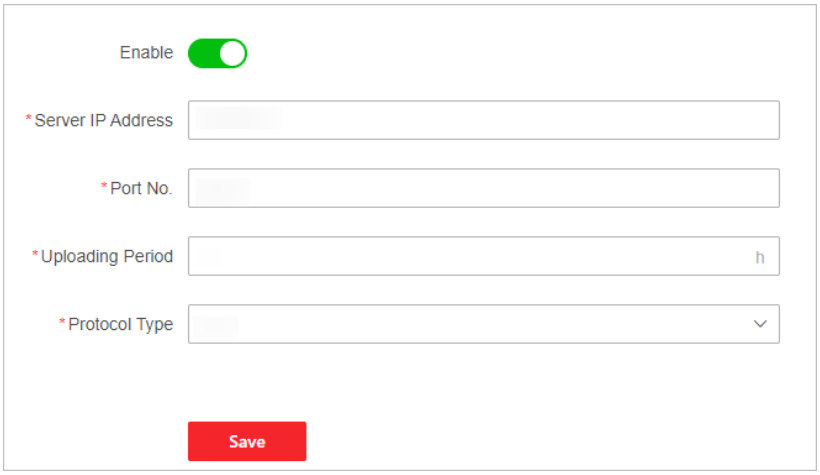

Figure 5-17 Enable Syslog

- On the **Websocket** page, enable Websocket as required. With Websocket enabled, you can export stream.


See Far, Go Further